DOCUMENT RESUME

ED 408 469 CE 074 270

AUTHOR	Hensley, Oliver D., Ed.; And Others
TITLE	The Tech Prep Handbook: Performance Assessment.
INSTITUTION	Texas Tech Univ., Lubbock. Coll. of Education.
SPONS AGENCY	Texas Higher Education Coordinating Board, Austin.
PUB DATE	Jun 97
NOTE	100p.; For related documents, see ED 402 452-454 and CE 074 271.
PUB TYPE	Guides - Non-Classroom (055)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Administrator Attitudes; Articulation (Education); Career Education; Consortia; Cooperative Planning; Coordination; Graduate Surveys; Integrated Curriculum; Intergenerational Programs; Lesson Plans; Models; Needs Assessment; *Performance Based Assessment; Portfolio Assessment; Portfolios (Background Materials); *Program Evaluation; Questionnaires; Records (Forms); School Business Relationship; Secondary Education; State Surveys; *Statewide Planning; Student Characteristics; *Student Evaluation; *Tech Prep; Technical Education; Two Year Colleges; *Vocational Education
IDENTIFIERS	*Texas

ABSTRACT

This handbook for tech prep practitioners in Texas consists of loose-leaf documents from the performance assessment areas currently available to tech prep practitioners. The first part of the handbook consists of 10 sample assessment documents that were selected from over 900 performance assessment based on a quantitative rating system. The documents, which are intended as guides for teachers developing their own assessment instruments/processes, are as follows: "Status Report May 1997: Summary of Statewide Data on Programs and Baseline Student Characteristics"; "1994-95 Tech Prep Graduate Survey"; "Assessment of Business and Industry Needs for Guadalupe County"; "Intergenerational Professions Information Packet for Intergenerational Professions for Tech Prep"; "Award Winning Lesson Plans for Integrating Workplace Skills into the Classroom"; "Competency/Outcomes for Tech Prep Programs and Crosswalks to SCANS [Secretary's Commission on Achieving Necessary Skills] Skills"; "Competency Profile CAGR 1302 Microcomputer Operating Systems"; "Real World Portfolios"; "The Master Plan for Career and Technical Education"; and "SOICC (State Occupational Information Coordinating Committee) Activities for PY (Program Year) 1995." The remainder of the document details the findings of the 1997 survey of 19 of Texas' 25 tech prep consortia. Appended are the student outcomes questionnaire and the geographic representation of responses to the questionnaire. (MN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 408 469

Strategic Planning
Evaluation of Curriculum
Assessment of Performance

The Tech Prep Handbook:

Performance Assessment

Editors: Oliver D. Hensley
Ronald D. Opp
Gloria Stewart
Clifford N. Chambers
Stacy Garrett
Ashley C. Ross

BEST COPY AVAILABLE

Lubbock, TX: Texas Tech University, SPECAP Research Group

CE074270

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND
DISSEMINATE THIS MATERIAL
HAS BEEN GRANTED BY

R D Opp

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)

SPECAP

Strategic Planning
Evaluation of Curriculum
Assessment of Performance

The Tech Prep Handbook:

Performance Assessment

Editors: Oliver D. Hensley
Ronald D. Opp
Gloria Stewart
Clifford N. Chambers
Stacy Garrett
Ashley C. Ross

Lubbock, TX: Texas Tech University, SPECAP Research Group

Preparation of the Handbook was funded by the Texas Higher Education Coordinating Board by a Carl D. Perkins Grant number 77130001 FICE Code 003644.

The Handbook is supported by the Texas Higher Education Coordinating Board (THECB). The contents of the handbook reflect the opinions of the editors and authors. The documents do not necessarily reflect the opinions or policies of the THECB.

Acknowledgments

Special thanks to our colleagues for their dedication and commitment to this team effort during the past year. We could not have completed this project without their assistance.

Advisory Council Members

Mr. Robert Franks, Director, Tech Prep at Navarro College

Ms. D'Arcy Poulson, Director, Director of Workforce Education, Howard College

Dr. Lee W. Sloan, Dean, Division of Occupational Education and Technology, Del Mar College, West Campus

The following handbook with its enclosed documents is provided to generate and document information related to peformance assessment in Tech Prep in Texas. If you would like to reproduce any of these, please contact the original source, as cited, for permission.

Editorial Staff:

Oliver Hensley, Ph.D., Editor
Ronald Opp, Ph.D., Editor
Gloria Stewart, Associate Editor
Clifford N. Chambers, Associate Editor
Stacy Garrett, Associate Editor
Ashley C. Ross, Associate Editor

June, 1997

Introduction to the Tech Prep Handbook

The Editors of *The Tech Prep Handbook* 1997 are committed to providing a series of documents, relevant knowledge, current information and comparative data to assist Tech Prep professionals. *The Tech Prep Handbook* is the culmination of an effort designed to gather and disseminate information on effective policies and practices for assessing performance of Tech Prep students in Texas. *The Handbook* has changed substantively in format and form over the past three years to meet the needs of Tech Prep stakeholders.

The first edition was cerlox-bound and organized by Dr. Pamela Cooper around the research findings of the SPECAP staff. The beginning edition was well-received by Tech Prep stakeholders because it documented the achievements of Tech Prep Consortia and their partners in the early stages of Tech Prep development. The first edition of the Handbook focused on the plans of the Tech Prep Consortia. The initial handbook was a 40-page document that provided an overview of the planning and implementation of Tech Prep programs in Texas. It identified six major impacts on Texas education, sketched a short history of the development of Carl Perkins legislation, described the role of SPECAP, provided a Tech Prep directors' validated model of the Tech Prep planning processes, pointed to a number of essential documents associated with the strategic planning for Tech Prep program development, and provided new ideas for the future development of Tech Prep. The first generation

models are general representations of objects and processes in the Tech Prep system. These are the prototypes used to explain the activities of the Tech Prep stakeholders, descriptive models of the work of Tech Prep directors, school administrators, teachers, students, business partners, and governmental support services.

The second edition, *The Tech Prep Handbook: Essential Documents to Promote Effective Tech Prep Policies and Practices*, was well received by Tech Prep stakeholders as a valuable publication and they encouraged the SPECAP staff to continue their scholarly efforts. Most importantly, the Tech Prep stakeholders encouraged the staff to expand the scope regarding relevant Tech Prep documents for practitioners' use.

The most recent edition, *The Tech Prep Handbook: Performance Assessment,* contains loose-leaf documents from the performance assessment areas currently available to practitioners today. The editors of the third edition are responding to requests from Tech Prep practitioners to provide them with sample documents used for assessing students' performance in Tech Prep in Texas.

Tech Prep professionals see the importance of models, standards of practice, explanations of exemplary policies and practices in strategic planning, the development and evaluation of curriculum, and the assessment of performance. The SPECAP staff has created and validated models that explain the total Tech Prep system. They have identified the major sectors and specific stakeholders participating in developing Tech Prep education. They have identified the general processes used by the stakeholders and have modeled that process. Together, these models generally explain the people

and activities being used to operate Tech Prep programs in the State of Texas (see Figure 1.).

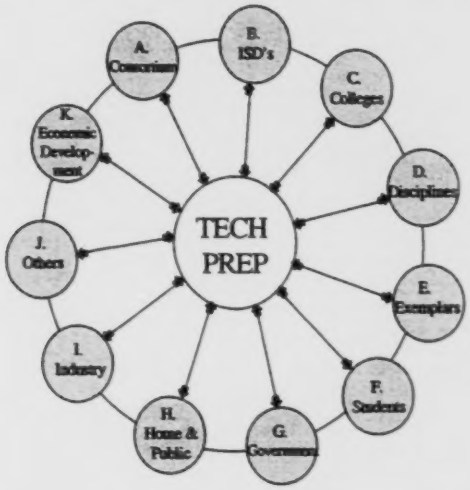


Figure 1. General process model of Tech Prep Stakeholders

The Tech Prep models provide a commonly accepted representation of the Tech Prep activities in the field bringing conceptual organization to an ataxic field. This is extremely important as prior to the adoption of these models, there was no functional organization for Tech Prep activities. Consequently, it was difficult to exchange ideas, critique activities and objectively determine performance as their was no uniformity in definition and representation of the entire Tech Prep system. These documents, models, and analyses provide other services to Tech Prep stakeholders as well. It provides an archive that shows the existing essential documents as they exist.

Tech Prep continues to develop with information and knowledge dispersed throughout a large number of regional consortia, governmental agencies, special

BEST COPY AVAILABLE

projects, and demonstration classrooms. This *Handbook* is an attempt to identify performance assessment documents currently available and review them for possible inclusion in the *Handbook*.

Tech Prep Handbooks are not a register of all documents, knowledge, information and data related to Tech Prep -- that is the function of a clearinghouse. Instead, the purpose of *The Tech Prep Handbooks* is to publish a representative sample of documents that may enhance the work of Tech Prep professionals.

As the *Handbook*s reach a wider audience of experts, revisions have been necessary and some gaps became obvious. We will continue to correct this by asking you to send us samples of documents that we have missed so that it is possible to design supplements to the *Handbook*.

The editors and staff at SPECAP wish to express their sincere appreciation to all those who have shared their ideas and documents with us...again...Thank you.

TABLE OF CONTENTS

Document Analysis..... 1

1997 Handbook: Sample of Inventory of Documents..... 3

Document "Status Report--May 1997: Summary of Statewide Data on Programs and Baseline Student Characteristics"..... 8

Document "1994-95 Tech Prep Graduate Survey"..... 10

Document "Assessment of Business & Industry needs for Guadalupe County"..... 13

Document "Intergenerational Professions Information Packet for Intergenerational Professions for Tech Prep"..... 17

Document "Award Winning Lesson Plans for Integrating Workplace Skills into the Classroom"..... 21

Document "Competency/Outcomes for Tech Prep Programs and Crosswalks to SCANS Skills"..... 24

Document "Competency Profile CAGR 1302 Microcomputer Operating Systems"..... 30

Document "Real World Portfolios"..... 35

Document "The Master Plan for Career and Technical Education"..... 39

Document "SOICC Activities for PY 1995"..... 43

Findings from the Survey and Phone Interviews..... 47

Response Characteristics.....47

Involvement in Student Outcomes Assessment.....50

The Assessment Process.....53

Developing/Implementing the Student Assessment Plan.....56

Evaluating/Improving the Student Outcomes Assessment Plan.....61

Recommendations and Conclusions.....65

Recommendations 73

Conclusions.....74

Document Analysis

The Tech Prep Handbook: Performance Assessment has been designed so that Tech Prep practitioners involved in the assessment of student performance have a ready source of models that they can adapt in assessing their own students' performance. Over 900 performance assessment documents were reviewed for possible inclusion in *The Tech Prep Handbook: Performance Assessment*.

Through document analysis, telephone interviews, attendance at conferences, and questionnaires, SPECAP researchers have identified a representative sample of documents from a wide array of categories, including portfolios, competency profiles, SCANS, legislative and regulatory documents, surveys from consortia, stakeholders, employers, and students, as well as other statewide efforts.

SPECAP used multiple readers for each document in the hopes of clearly identifying documents that would be useful to interested parties. Not unlike past projects, these documents serve as a precursor of a larger body of work, as we hope to continue collecting and analyzing related documents.

Similar to preceding editions, the *Handbook* may contain only excerpts of some documents (not reproduced in total). The coding scheme used expands on the previous coding scheme with the final digits of the coding scheme reflecting first, the year of publication, followed by the month and date of publication, if known. The last

digits of the code reflect the total number of pages the document contained in original form.

Ten sample documents from the hundreds the SPECAP group reviewed are included in this handbook. The documents were selected for inclusion in the handbook based on a quantitative rating system developed by the SPECAP group. These documents are not intended to be used in toto, but, rather are provided in order to enable local area practitioners to access resources in the area of student assessment document and plans as guides when developing their own assessment instruments and processes.

1997 Handbook
Sample of Inventory of Documents

A-000.xx-axxxxx.97.05.00-000

Document Title:

Status Report--May 1997: Summary of Statewide Data on Programs and Baseline Student Characteristics. Tech Prep Texas

Document Author:

Dr. Carrie Brown

For additional information regarding this document, contact:

Tech Prep Leadership & Evaluation Project: Region V Education Service Center
2295 Delaware Street
Beaumont, TX 77703
(409) 654-6425

A-068.10-axxxxx.96.12.30-002

Document Title:

1994-95 Tech Prep Graduate Survey

Document Author:

Romona Vaughan

For additional information regarding this document, contact:

North Texas Tech Prep Consortium
4105 Maplewood
Wichita Falls, TX 76308
(817) 696-8752

B-018.xx-bxxxxx.95.00.00-000
Document Title:

Assessment of Business & Industry Needs for Guadalupe County.

Document Author:

J. Lawless

For additional information regarding this document, contact:

Seguin Independent School District: Career and Technology Department
P.O. Box 31
Seguin, TX 78156-0031
(210) 372-5770 ext. 377

B-029.xx-cxxxxx.94.10.05-003
Document Title:

Intergenerational Professions Information Packet for Intergenerational Professions for Tech Prep

Document Author:

Unknown

For additional information regarding this document, contact:

Texas Tech University: Home Economics Curriculum Center
Box 41161
Lubbock, TX 79409-1161
(806) 742-3029

F-082.xx-axxxxx.93.00.00-047
Document Title:

Award Winning Lesson Plans for Integrating Workplace Skills into the Classroom

Document Author:

Unknown

For additional information regarding this document, contact:

Temple College: Central Texas Tech Prep Consortium
2600 South First Street
Temple, TX 76504-7435
(817) 773-9961

F-082.xx-cxxxxx.00-000
Document Title:

Competency/Outcomes for Tech Prep Programs and Crosswalks to SCANS Skills

Document Author:

Unknown

For additional information regarding this document, contact:

Alamo Community College District
811 W. Houston Street
San Antonio, TX 78207-3033
(210) 220-1500

F-082.xx-cxxxxx.00.00.00-004
Document Title:

Competency Profile CAGR 1302 Microcomputer Operating Systems

Document Author:

Unknown

For additional information regarding this document, contact:

Texas State Technical College
Attn: Drafting and Design Technology
3801 Campus Drive
Waco, TX 76705
(817) 799-3611

F-088.10-axxxxx.96.09.22-033
Document Title:

Real World Portfolios

Document Author:

Chris Ferguson

For additional information regarding this document, contact:

Temple College: Central Texas Tech Prep Consortium
2600 South First Street
Temple, TX 76504
(817) 773-9961

G-022.xx-gxxxxx.93.00.00-252
Document Title:

The Master Plan for Career and Technical Education

Document Author:

Unknown

For additional information regarding this document, contact:

Texas Higher Education Coordinating Board
7745 Chevy Chase Drive
Austin, TX 78752
(512) 483-6250

G-060.xx-gxxxxx.95.09.30-001
Document Title:

SOICC Activities for PY 1995

Document Author:

Unknown

For additional information regarding this document, contact:

Texas State Occupational Information Coordinating Committee
Travis Building, Suite 205,
3520 Executive Center Drive
Austin, TX 78731

"Status Report--May 1997"
Summary of Statewide Data
On Programs and Baseline Student Characteristics"
A-0xx.xx-axxxxx.97.06.00-001

Dr. Carrie Brown
Tech Prep Leadership &
Evaluation Project
2295 Delaware Street
Beaumont, TX 77703
(409) 654-6425

May 1997

TABLE OF CONTENTS

List of Exhibits iii
Figures iii
Tables v

Definitions of Tech-Prep Education Programs and Workforce Education 1
Introduction 2
Defining the Study Population 6

Baseline Student Characteristics: Retention 9
Attendance Rates 9
Drop-out Rates 9
Graduation Rates 10
Graduation Plans 11

Baseline Student Characteristics: Achievement 13
TAAS Test Performance 13
SAT I/ACT Test Performance 19
TASP Test Performance 21

Baseline Student Characteristics: Automated Student Follow-up 23

Tech-Prep Program Development 25

Status of the Tech-Prep Program Inventory 28

Level of Participation 30
By Planning Region 30
By Public Two-year Postsecondary Institutions 31
By Public Independent School District 32

Career Guidance, Scheduling, and Teaching Strategies 35

Tech-Prep Federal Funding 37

Cost Effectiveness 39

Data Summary 41

Endnotes with Annotations 43

"1994-95 Tech Prep Graduate Survey"
A-068.10-axxxxx.96.12.30-002

Romona Vaughan
North Texas Tech Prep Consortium
4105 Maplewood
Wichita Falls, TX 76308
(817) 696-8752

1994-95 TECH PREP GRADUATE SURVEY

A telephone/mail-out survey of the 1994-95 Tech Prep graduating seniors was conducted in November/December 1995. Of the 86 seniors who graduated, 48 completed the survey for a return rate of 56%. Only two career paths had senior students last year. The Computer Aided Design career path returned 33 of 63 for a 54% return rate. The Health Careers path returned 15 of 23 surveys for a 65% return rate.

The purpose of the survey was to evaluate the effectiveness of the Tech Prep program in the North Texas Tech Prep Consortium. In our efforts to determine the extent of benefits gained by the students, we were interested in:

a. High school graduation rate

b. Extent of enrollment in post-secondary schools

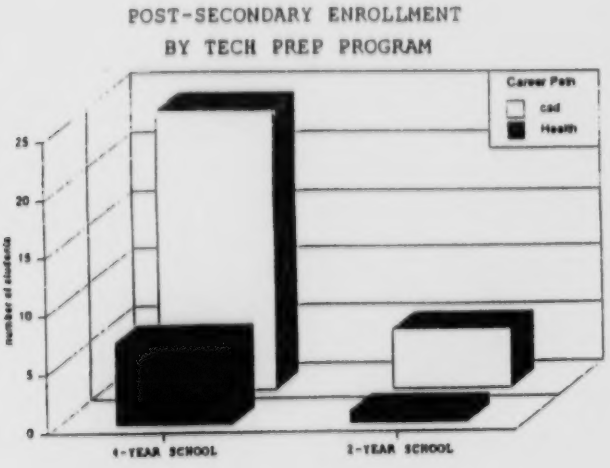
c. How many used articulated credit

d. How many graduates are still pursuing their chosen Tech Prep career path

e. Demographics by career path

One hundred percent of Tech Prep students answering the survey graduated from high school.

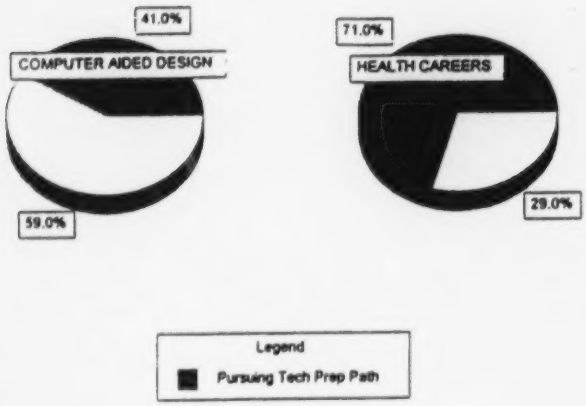
Post-secondary enrollment of respondents was 79%, or a total of 38 out of 48. This was heavily weighted toward the four-year institutions. Approximately 13% enrolled in a two-year school, versus the 66% who enrolled in a four-year school. The following chart breaks down enrollment by career path and two-year/four-year schools:



Of the six students enrolled in a two-year college, the one pursuing a health career was using articulated credit. Three of the five Computer Aided Design graduates reported using articulated credit. The other two students have chosen to pursue unrelated fields of study.

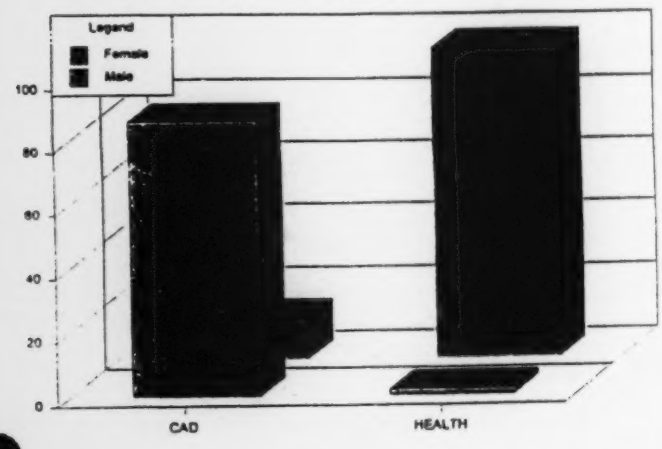
Of the 48 respondents to the survey, exactly 50% indicated that they are still pursuing the career path chosen in high school. The following chart breaks it out by Tech Prep program.

Percentage of Students
Pursuing Tech Prep Paths

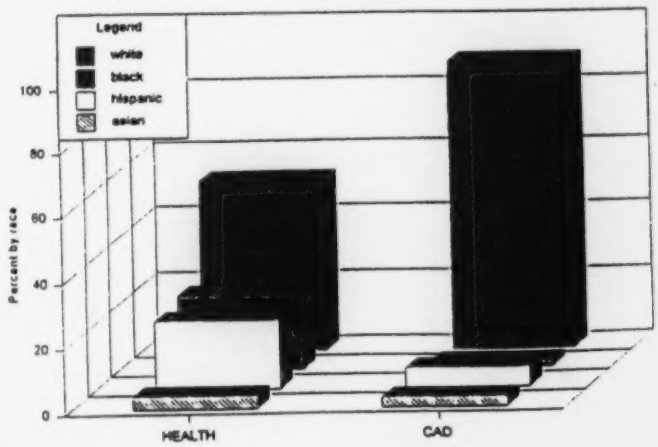


The following charts indicate the demographic make-up of Tech Prep graduates by program, gender and race:

Tech Prep Programs By Gender



Tech Prep Programs by Race



BEST COPY AVAILABLE

"Assessment of Business & Industry Needs for Guadalupe County"
B-018.xx-bxxxxx.95.00.00-000

J. Lawless
Seguin Independent School District
Career and Technology Department
P.O. Box 31
Seguin, TX 78156-0031
(210) 372-5770 ext. 377

BEST COPY AVAILABLE

Seguin Independent School District

Career and Technology Department
P. O. Box 31
Seguin, Texas 78156-0031
Phone: 210-372-5770 Ext.377
FAX: 210-372-5770 Ext. 308

B-018.xx-bxxxxx.95.00.00-000
Assessment of Business & Industry for Guadalupe County.

SURVEY OF GUADALUPE COUNTY BUSINESS AND INDUSTRY NEEDS

In the spring of 1995, the Seguin Independent School District received funds from the Capital Area Tech Prep Consortium and the Alamo Tech Prep Consortium to conduct a survey and to compile the results. This survey was to determine the employment needs of selected businesses and industries in Guadalupe County. The Career and Technology Department at Seguin High School was responsible for the coordination of this effort.

Introductory letters and survey instruments were mailed to the sites prior to the visits. A group of Career and Technology teachers teamed with academic teachers to conduct interviews with the employers and employees at the selected sites. Each participating entity was visited by one of the teams to discuss the survey results and identify additional concerns and needs.

To maintain and move into the global economy, Seguin Independent School District and the employers of Guadalupe County must keep pace with the times in training, retraining, education and the enhancement of the workforce in the area. This survey in an effort to form partnerships with businesses and industries and the educational entities; to determine the education and training requirements for entry, technical and professional level positions; and to assist in designing career and technology and academic programs to meet these needs.

The compiled survey is included in this document for your review. These results may be used in designing educational programs that are responsive to the needs of the community and Guadalupe County. Seguin ISD will also use the results to assist us in focusing the curriculum to meet the identified employment needs. It is hoped that you will review the results and use the survey design to assist you in your district and community to form similar partnerships and provide school-to-work transition opportunities for students.

We would also like to express our sincerest appreciation to the businesses and industries and their employees for all of their assistance in this endeavor. The support of these employers and the community to Seguin ISD is boundless.

We would also like to thank the administrators of Seguin High School and the District for making this effort possible. For their tireless efforts in conducting interviews and coordinating the information to become the document that it is today, we would like to thank the following personnel: Janette Lawlis, Career Coordinator; teachers, Jerry MyCue and Joel Day, Drafting & Design; Hugh Timmons, Electronics; Jeff Schuehle, Metal Trades; Nancy Virdin, English; Bobbie Haskit, Home Economics; Jared Marks, Health/coach; George Ann Fuqua, Health Occupations; and Gary Vaughn, Social Studies/coach.

EDUCATION NEEDS ASSESSMENT SURVEY
EMPLOYEES

Name: _____

Home Address: _____ Zip Code: _____

Company Name: _____

Company Address: _____ Zip Code: _____

Your Position/Title: _____

_____

1. Would it be easier for you to pursue higher education if college-level courses and other training courses were offered in Guadalupe County? 96% Yes 4% No

2. If you enrolled in courses, what would be your objective?

   a. 31% Improve skills in current job
   b. 54% Career advancement
   c. 14% Take leisure courses
   d. N/A Other_____

3. If you enrolled in courses, what would be our academic goal?

   a. 43% Earn a two-year degree
   b. 25% Earn a four-year degree
   c. 7% Earn a certificate
   d. 18% Achieve/maintain a license
   e. 07% Other _____

4. What would be important to you in deciding to enroll in a course in Guadalupe County?

   a. 32% Cost
   b. 32% Near home
   c. 32% Classes available
   d. 04% Other _____

5. If courses were offered in Guadalupe County, in which would you consider enrolling?

   a. 31% Academic courses
   b. 20% Career and technical - office/group skills
   c. 00% Electronics,
   d. 00% Metal working
   e. 4% Criminal justice
   f. 31% Health occupations
   g. 14% Other Spanish

6. List specific courses you would like to take in Guadalupe County.

   Art, Time Management, Business Law, Organization Designs, Microbiology, Safety & Ergonomic Issues, Computer Courses, Child Care, Spanish, Chemistry

7. When would be the **BEST** time, outside of work hours, for you to attend classes?

a. 7% Morning (8:00-12:00)
b. 7% Afternoon (1:00-5:00)
c. 63% Evening (6:00-10:00)
d. 26% Saturday
e. 0 Other _____

8. If courses were offered in Guadalupe County, check areas in which you might seek assistance: (Check all that apply)

a. 40% Financial aid
b. 7% Child care
c. 24% Career planning
d. 12% Tutoring
e. 2% Finding employment
f. 0 Learning English
g. 14% Study skills
h. 0 Transportation
i. 0 Other _____

9. What type of assistance for education does your employer provide? (Check all that apply)

a. 47% Tuition assistance for credit courses (job related)
b. 16% Tuition assistance for non-credit courses (job related)
c. 29% Paid time to attend training and workshops
d. 8% Tuition assistance for non-job related courses
e. 0 Other _____

10. How have you learned about education courses, programs, and services available in the Guadalupe County area in the past? (Check all that apply)

a. 5% Radio
b. 29% Newspaper
c. 0 Television
d. 7% High school personnel
e. 19% Brochures/flyers
f. 26% Friends and relatives
g. 7% Employers
h. 0 Other _____

11. Please list your important on-the-job training needs.

Computers, management, business writing, new math, problem solving, accounting, Spanish, speech, typing, team methods, statistics, public speaking, CEU nursing

12. If you know of others who might be interested in education/training, please provide name, address and phone number below:

No responses

13. Please provide any comments, suggestions, or recommendations you have concerning the need for additional higher education programs in the Guadalupe County area.

No responses

"Intergenerational Professions Information Packet for Intergenerational Professions for Tech Prep"
B-029.xx-cxxxxx.94.10.05-003

Texas Tech University
Home Economics Curriculum Center
Box 41161
Lubbock, TX 79409-1161
(806) 742-3029

TECH PREP INTERGENERATIONAL PROFESSIONS PROJECT

The Tech Prep Intergenerational Professions program was developed by the Home Economics Curriculum Center at Texas Tech University in cooperation with the Texas Education Agency, the Texas Higher Education Coordinating Board, and the Texas Department of Commerce. The intergenerational area was the target for the project focus due to statistics on the growing demand for skilled workers within the intergenerational occupations. Educators are challenged with providing these trained, skilled professionals for the work force. The primary goal of the Tech Prep Intergenerational Professions project was the development of a competency-based curriculum that would prepare students for employment in careers involving care and services for children, elders, and dependent adults in separate as well as in joint settings. Products developed to assist school districts and postsecondary institutions in implementing the Intergenerational Professions program include: a secondary curriculum guide entitled *Intergenerational Professions Instructional Guide*; validated secondary and postsecondary competencies; a Career Pathways Model; and Intergenerational Professions Articulation Models including three separate six-year plans.

The 1992-93 project year focused on identification and validation of competencies needed for intergenerational professions, and subsequently the development of a secondary curriculum guide for the two-year Intergenerational Professions course identified as Intergenerational Professions I and II. The secondary curriculum guide is entitled *Intergenerational Professions Instructional Guide* and covers 106 competencies that were validated by business and industry professionals and educators in the spring of 1993. The *Intergenerational Professions Instructional Guide* format includes identification of teaching strategies which integrate academic skills in the areas of math, science, language arts, and social studies. The guide also includes learning experiences that provide students opportunities to master the SCANS competencies and foundation skills. The 1993-94 project focus encompassed development of an expanded competency matrix for postsecondary programs and recommendations to postsecondary institutions regarding articulation possibilities and courses needed for students to reach Tech Prep Associate Degree and advanced skills outcomes.

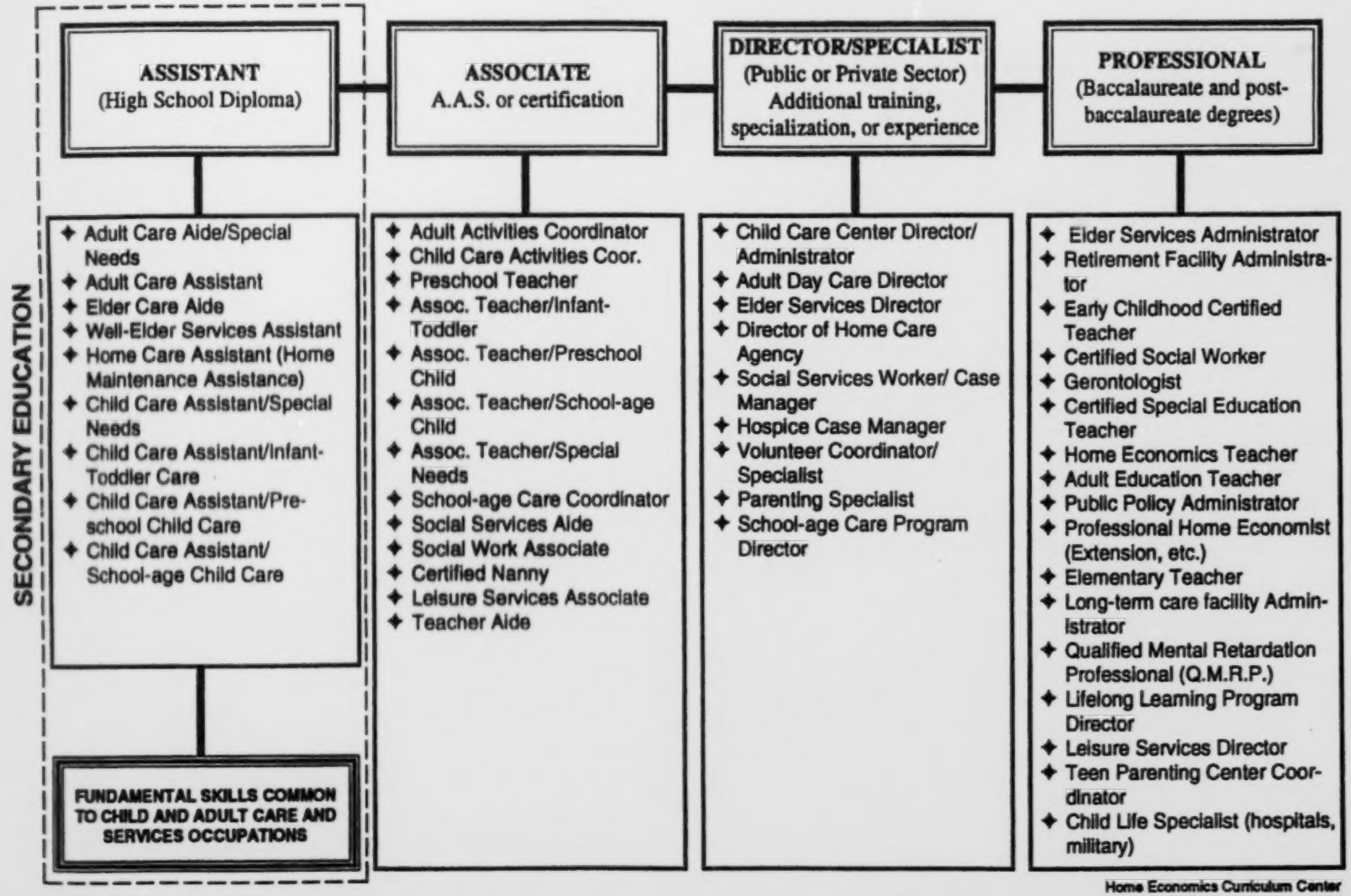
The Career Pathways Model provides students with specific career direction and shows the relationship of education and training to career advancement. In addition, the Career Pathways Model illustrates the wide variety of career options for students who receive education and training in this area. Included in the career path are job opportunities with child care centers; adult day care centers; corporate care facilities; intergenerational facilities that provide care, services, and interactive opportunities for children and elders; 55+ programs at hospitals and banks; life enrichment centers, elder hostels, and Senior Academies; recreation and leisure industries; and social services agencies.

The Intergenerational Professions program provides students with education and training for a wide array of careers that involve care and services for children and adults. The increasing demand for professionals with expertise in these areas, as well as the emerging of many new occupations, makes the intergenerational career focus an exciting arena of opportunities for many students.

Home Economics Curriculum Center, Texas Tech University, 1994

BEST COPY AVAILABLE

Tech Prep Intergenerational Professions Career Pathway


SECONDARY EDUCATION
ASSISTANT
(High School Diploma)
ASSOCIATE
A.A.S. or certification
DIRECTOR/SPECIALIST
(Public or Private Sector)
Additional training, specialization, or experience
PROFESSIONAL
(Baccalaureate and post-baccalaureate degrees)
✦ Adult Care Aide/Special Needs
✦ Adult Care Assistant
✦ Elder Care Aide
✦ Well-Elder Services Assistant
✦ Home Care Assistant (Home Maintenance Assistance)
✦ Child Care Assistant/Special Needs
✦ Child Care Assistant/Infant-Toddler Care
✦ Child Care Assistant/Pre-school Child Care
✦ Child Care Assistant/ School-age Child Care
✦ Adult Activities Coordinator
✦ Child Care Activities Coor.
✦ Preschool Teacher
✦ Assoc. Teacher/Infant-Toddler
✦ Assoc. Teacher/Preschool Child
✦ Assoc. Teacher/School-age Child
✦ Assoc. Teacher/Special Needs
✦ School-age Care Coordinator
✦ Social Services Aide
✦ Social Work Associate
✦ Certified Nanny
✦ Leisure Services Associate
✦ Teacher Aide
✦ Child Care Center Director/ Administrator
✦ Adult Day Care Director
✦ Elder Services Director
✦ Director of Home Care Agency
✦ Social Services Worker/ Case Manager
✦ Hospice Case Manager
✦ Volunteer Coordinator/ Specialist
✦ Parenting Specialist
✦ School-age Care Program Director
✦ Elder Services Administrator
✦ Retirement Facility Administrator
✦ Early Childhood Certified Teacher
✦ Certified Social Worker
✦ Gerontologist
✦ Certified Special Education Teacher
✦ Home Economics Teacher
✦ Adult Education Teacher
✦ Public Policy Administrator
✦ Professional Home Economist (Extension, etc.)
✦ Elementary Teacher
✦ Long-term care facility Administrator
✦ Qualified Mental Retardation Professional (Q.M.R.P.)
✦ Lifelong Learning Program Director
✦ Leisure Services Director
✦ Teen Parenting Center Coordinator
✦ Child Life Specialist (hospitals, military)
FUNDAMENTAL SKILLS COMMON TO CHILD AND ADULT CARE AND SERVICES OCCUPATIONS

Home Economics Curriculum Center
Texas Tech University June, 1994

Tech Prep
INTERGENERATIONAL PROFESSIONS
Postsecondary Competencies

Ethics and Professionalism

a. Demonstrate characteristics of an effective intergenerational professional.

b. Exhibit ethical behavior in all situations, including confidentiality.

c. Assess personal qualities and skills needed for employability and job success.

d. Attain professional credentials as appropriate.

e. Evaluate resources for intergenerational professions.

f. Utilize appropriate resources for intergenerational professions.

g. Demonstrate effective interpersonal interactions.

h. Respond to current issues and needs.

i. Implement methods to counteract discrimination in settings that provide care and services to children and adults.

Policies and Standards for Child and Adult Services

a. Evaluate types of settings related to child and adult services.

b. Develop goals, policies, and procedures for quality programs in compliance with existing standards of regulatory agencies.

c. Determine compliance with requirements of regulatory agencies.

d. Develop a maintenance calendar for the facility.

e. Develop appropriate health and safety standards for specific settings.

f. Develop a policy of advocacy for cultural diversity and special needs in all settings.

Home Economics Curriculum Center
Texas Tech University June, 1994

"Award Winning Lesson Plans for Integrating Workplace Skills into the Classroom"

F-082.xx-axxxxx.93.00.00-047

Central Texas Tech Prep Consortium
Temple College
2600 South First Street
Temple, TX 76504-7435
(817) 773-9961

Introduction

During the 1992-1993 school year, the Central Texas Tech Prep Consortium sponsored a curriculum writing contest. The purpose of the contest was to establish models for learning which can be disseminated throughout the region. Each proposal was to completely describe a full cycle of learning on a particular concept or topic. The lessons were to focus on skills transferable to the workplace with the workplace being explicitly addressed in the activities. The lessons could cover one class period or several and should have involved one or more of the following methodologies: applied academics, cooperative learning, 4MAT®, multi-culturalism, or integrated curriculum (one class -- integrated disciplines or multi classes -- multi classes).

Winners were awarded vouchers for classroom materials. The vouchers were for the following amounts:

First prize	$2000
Second Prize	$1000
Third Prize	$500
Fourth Prize	$250(2)
Honorable Mention	$100

Central Texas Tech Prep Consortium 1993

UNIT

CAREER RESEARCH USING INFORMATIONAL TECHNIQUES

Terminal Performance Objective (Outcome)

The purpose of this unit is to make the students think seriously about themselves, to help them anticipate their future profession, and to improve reading, writing, research, and speaking skills through a project that relates directly to them.

Enabling Objective (Competencies)

The student will use the library, counselor's office, college catalogs, occupational resources, community resources, and speakers to gather, organize, and present information about career choices in written and oral form.

Correlations:

Texas Essential Elements — Title 19 TAC chapter 75.61(hh)
English Language Arts
1A, 1, 1C, 1E, 2I, 2J

Texas Assesment of Academic Skills — Writing objectives 1-7;
Reading objectives 2-6

SCANS — IC, IA, ID, IIA, IIB, IIC, IIF, IIIA, IIIB, IIIC, IIID, VA

Central Texas Tech Prep Consortium 1993

"Competency/Outcomes for Tech Prep Programs and Crosswalks to SCANS Skills"
F-082.xx-cxxxxx.00.00.00-000

Alamo Community College District
811 W. Houston Street
San Antonio, TX 78207-3033
(210) 220-1500

WORKPLACE KNOW-HOW

The know-how identified by SCANS is made up of five competencies and a three-part foundation of skills and personal qualities needed for solid job performance.
These include:

COMPETENCIES. Effective workers can productively use:

* **Resources:** ***allocating time. money, materials, space, staff.***

* **Interpersonal Skills:** ***working on teams, teaching others, serving customers, leading, negotiating, and working well with people from culturally diverse backgrounds.***

* **Information:** ***acquiring and evaluating data, organizing and maintaining files, interpreting and communicating, and using computers to process information;***

* **Systems:** ***understanding social, organizational, and technological systems, monitoring and correcting performance, and designing or improving systems;***

* **Technology:** ***selecting equipment and tools, applying technology to specific tasks, and maintaining and troubleshooting technologies.***

THE FOUNDATION. Competence requires:

* **Basic Skills:** ***reading, writing, arithmetic and mathematics, speaking and listening;***

* **Thinking Skills:** ***thinking creatively, making decisions, solving problems, seeing things in the mind's eye, knowing how to learn, and reasoning;***

* **Personal Qualities:** ***individual responsibility, self-esteem, sociability, self-management and integrity.***

INFORMATION

C5 Acquires and Evaluates Information. Identifies need for data, obtains it from existing sources or creates it, and evaluates its relevance and accuracy.

Examples:

- *develop a form to collect data;*
- *research and collect data from appropriate sources; or*
- *develop validation instrument for determining accuracy of data collected.*

Key Dimensions and Concepts:

C5 Acquires and Evaluates Information. In order to acquire and evaluate information proficiently, the individual must be skilled at:

- *analyzing questions to determine information needed;*
- *selecting and evaluating information; and*
- *determining when new information must be created.*

C6 Organizes and Maintains Information. Organizes, processes, and maintains written or computerized records and other forms of information in a systematic fashion.

Examples:

- *develop a filing system for storing information (printed or computerized);*
- *develop an inventory record-keeping system;*
- *develop a bill processing system*

Key Dimensions and Concepts:

C6 Organizes and Maintains Information. Effectively performing this skill requires:

- *understanding and organizing information from computer, visual, oral, and physical sources in readily accessible formats (e.g. computerized data bases, spreadsheets, microfiche, video disks, and paper files);*
- *transforming data in order to organize it (e.g. by sorting, classifying, or more formal methods).*

C7 Interprets and Communicates Information. Selects and analyzes information and communicates the results to others using oral, written, graphic, pictorial, or multi-media methods.

Examples:

- *produce a report using graphics to interpret and illustrate associated narrative information;*
- *make an oral presentation using several different media to present information; or*
- *develop material for communicating information to be used during a teleconference call.*

Key Dimensions and Concepts:

C11 Serves Clients/Customers. Competent performance requires a worker to:

Examples:

- *listen actively to identify needs and avoid misunderstandings;*
- *communicate in a positive manner, especially when handling complaints or conflicts; and*
- *be familiar with relevant resources for satisfying customer needs.*

C12 Exercises Leadership. Communicates thoughts, feelings, and ideas to justify a position; and encourages, persuades, convinces, or otherwise motivates an individual or group, including responsibly challenging existing procedures, policies, or authority.

Examples:

- *use specific team-building concepts to develop a work group;*
- *select and use an appropriate leadership style for different situations; or*
- *use effective delegation techniques.*

Key Dimensions and Concepts:

C12 Exercises Leadership. Competent leaders are able to:

- *make positive use of the rules/values followed by others*
- *justify a position logically and appropriately;*
- *establish credibility through competence and integrity;*
- *take minority viewpoints into consideration.*

C13 Negotiates. Works towards an agreement that may involve exchanging specific resources or resolving divergent interests.

Examples:

- *develop an action plan for negotiating;*
- *write strategies for negotiating; or*
- *conduct an individual and a team negotiation.*

Key Dimensions and Concepts:

C13 Negotiates. This requires them to:

- *research the position and the history of a conflict;*
- *set realistic and attainable goals;*
- *present facts and arguments objectively;*
- *listen to, hear, and reflect on what has been said;*
- *clarify problems, when necessary, and resolve conflicts;*
- *adjust quickly to new facts/ideas;*
- *propose and examine possible options; and*
- *make reasonable compromises.*

EXHIBIT 2
Assignments that Integrate the SCANS Competencies Into the Core Curriculum Area

	CURRICULUM AREA				
Competency	**English/Writing**	**Mathematics**	**Science**	**Social Studies/Geography**	**History**
Resources	Write a proposal for an after-school career lecture series that schedules speakers, coordinates audio-visual aids, and estimates costs.	Develop a monthly family budget, taking into account expenses and revenues, and--using information from the budget plan--schedule a vacation trip that stays within the resources available.	Plan the material and time requirements for a chemistry experiment, to be performed over a two-day period, that demonstrates a natural growth process in terms of resource needs.	Design a chart of resource needs for a community of African Zulus. Analyze the reasons why three major cities grew to their current size.	Study the Vietnam War, researching and making an oral presentation on the timing and logistics of transport of materials and troops to Vietnam and on the impact of the war on the Federal budget.
Interpersonal Skills	Discuss the pros and cons of the argument that Shakespeare's *Merchant of Venice* is a racist play and should be banned from the school curriculum.	Present the results of a survey to the class, and justify the use of specific statistics to analyze and represent the data.	Work in a group to design an experiment to analyze the lead content in the school's water. Teach the results to an elementary school class.	In front of a peer panel, debate whether to withdraw U.S. military support from Japan. Simulate urban planning exercise for Paris.	Study America's constitution and roleplay negotiation of the wording of the free States/slave States clause by different signers.
Information	Identify and abstract passages from a novel to support an assertion about the values of a key character.	Design and carry out a survey, analyzing data in a spreadsheet program using algebraic formulas. Develop table and graphic display to communicate results.	In an entrepreneurship project, present statistical data on a high-tech company's production/sales. Use computer to develop statistical charts.	Using numerical data and charts, develop and present conclusions about the effects of economic conditions on the quality of life in several countries.	Research and present papers on effect of Industrial Revolution on class structure in Britain, citing data sources used in drawing conclusions.

RUBRIC FOR SCANS WORK PLACE COMPETENCY SKILLS

INFORMATION

Levels of Proficiency

SKILLS	1	2	3	4	5
Acquires and Evaluates Information C5	rarely obtains, with assistance, instructor identified data from existing sources	routinely obtains, with assistance, instructor identified data from existing sources	routinely obtains instructor identified data from existing sources	routinely analyzes need for data, obtains data from existing sources or creates it	routinely analyzes need for data, obtains data from existing sources or creates it, and evaluates its relevance and accuracy
Organizes and Maintains Information C6	rarely understands, transforms information from computer, visual, oral, and physical sources in written and computerized formats, with all tasks being identified and monitored by the instructor	routinely understands, transforms information from computer, visual, oral, and physical sources in written and computerized formats, with all tasks being identified and monitored by the instructor	routinely understands, transforms information from computer, visual, oral, and physical sources in written and computerized formats in a systematic fashion with two of the above tasks monitored by the instructor	routinely understands, transforms information from computer, visual, oral, and physical sources in written and computerized formats in a systematic fashion with only one of the above tasks monitored by the instructor	routinely understands, transforms, and organizes information from computer, visual, oral, and physical sources in easily accessible formats (written and computerized) in a systematic fashion
Interprets and Communicates Information C7	rarely completes instructor monitored selection of information, selection of media, and conversion of the information to a desired format	routinely completes instructor monitored selection of information, selection of media, and conversion of the information to a desired format	routinely selects information, identifies media (oral, written, graphic, pictorial, or multi-media) for communicating information and converts information to the desired format with only one of the above task(s) monitored	routinely selects information, identifies appropriate media (oral, written, graphic, pictorial, or multi-media) for communicating information and converts information to the desired format	routinely selects and analyzes information, identifies appropriate media (oral, written, graphic, pictorial, or multi-media) for communicating information and creatively converts information to the desired format
Uses Computers to Process Information C8	rarely uses computer to enter, modify, retrieve, store, and verify information	routinely uses computer to enter, modify, retrieve, store, and verify information in an appropriate format with the above task(s) monitored	routinely uses computers to enter, modify, retrieve, store, and verify information, chooses an appropriate format with only one of the above task(s) monitored	routinely uses computers to enter, modify, retrieve, store, and verify information, and chooses an appropriate format	routinely uses computers to enter, modify, retrieve, store, and verify information, and chooses the best format for the accurate conversion of information

copyright 1994, Jo Huffman

"Competency Profile CAGR 1302
Microcomputer Operating Systems"
F-082.xx-cxxxxx.00.00.00-004

Texas State Technical College
Attn: Drafting and Design Technology
3801 Campus Drive
Waco, TX 76705
(817) 799-3611

F-082.xx-cxxx-000
Competency Profile CAGR 1302
MicroComputer Operating Systems

COMPETENCY PROFILE

Instructor: _____
Instructional Program: _____
_____
School: _____
School Address: _____
_____

Student: _____
Address: _____
_____
Telephone: _____
Social Security Number: _____
IN CASE OF EMERGENCY:
Name: _____
Telephone: _____
Family Doctor: _____
Telephone: _____

Date of Enrollment: _____
Date of Withdrawal: _____
Date of Completion: _____
Total Hours Absent: _____
Total Instructional Hours: _____
Total On-The-Job Training Hours: _____

31

TECH PREP ★ TEXAS: *EDUCATION THAT WORKS*

ON-THE-JOB TRAINING/WORK EXPERIENCE

Duration of Employment	Job Title	Job Description	Supervisor's Name	Name/Address of Employer	Telephone

45

46

Competency Mastered - MCOT 1302 Microcomputer Operating Systems	Rating Scale	Sign-Off Date
61. Use the REM command.		
62. Use the PAUSE command.		
63. Save a batch program.		
64. Print a batch program.		
65. Enter the DOS editor.		
66. Exit the DOS editor.		
67. Modify the search path.		
68. Execute a batch program.		
69. Cancel the execution of a batch program.		
70. Edit a batch program.		
71. Copy text.		
72. Move text.		
73. Search for text.		
74. Replace text.		
75. Use the Verify command.		
76. Track a deleted file.		
77. Use the mirror program.		
78. Use the Undelete command.		
79. Create, save, and test on auto exec.bat file.		
80. Create, save, and test a config.sys file.		

Competency Mastered - MCOT 1302 Microcomputer Operating Systems	Rating Scale	Sign-Off Date
81. Install a device driver.		
82. Use the device command.		
83. Use the buffers command.		
84. Use the files command.		
85. Use the break command.		
86. Use the last drive command.		
87. Use the type command.		
88. Install an application software program.		
89. Execute an application software program.		
90. Create a menu.		
91. Format a diskette.		
92. Use the XCOPY command.		
93. Use the ATTRIB command.		
94. Use the CHKDSK command.		
95. Use the DOS shell and all of the internal commands.		
96. Determine the memory on a computer.		
97. Expand memory on a computer.		
98. Install extended memory.		
99. Install expanded memory.		

Competency Mastered - MCOT 1302 Microcomputer Operating Systems	Rating Scale	Sign-Off Date
100. Free conventional memory.		
101. Run DOS in extended memory.		
102. Run device drivers in upper memory.		
103. Run programs in upper memory.		
104. Speed up a computer system.		
105. Use the buffers command.		
106. Use the fast open program.		
107. Use the smart dry program.		
108. Use the RAM drive memory-disk program.		
109. Install a RAM disk.		
110. Run a program from the RAM disk.		
111. Use the sort command.		
112. Use the find command.		
113. Use the move command.		
114. Back up a hard disk.		
115. Partition a hard disk.		
116. Transport files between computers.		
117. Use the recover command.		
118. Use the unformat command.		
119. Use the print command.		

Approved by:

Teacher's Name Date

EMPLOYABILITY COMPETENCIES ON BACK COVER

STUDENT'S NAME_____ **MCOT 1302 - MICROCOMPUTER OPERATING SYSTEMS**

TEACHER_____ SCHOOL_____

DIRECTIONS: Evaluate the student by marking the appropriate number or letter to indicate the degree of competency. The rating for each task should reflect **employability readiness** rather than the grades given in class.

Rating Scale:
3 Mastered - can work independently with no supervision
2 Requires Supervision - can perform job completely with limited supervision
1 Not Mastered - requires instruction and close supervision
N No Exposure - no experience or knowledge in this area

Competency Mastered - MCOT 1302 Microcomputer Operating Systems	Rating Scale	Sign-Off Date
1. List the four basic units of a microcomputer.		
2. List the five operations of a microcomputer.		
3. Explain the difference between main memory and conventional memory.		
4. Explain the difference between extended memory and expanded memory.		
5. List the five types of input devices.		
6. List the five types of output devices.		
7. Describe the power-on self test.		
8. Explain how to cold boot a computer.		
9. Explain how to warm boot a computer.		
10. Clear a screen.		
11. Set the date for a computer.		
12. Set the time on a computer.		
13. List a directory of a diskette.		
14. Pause a directory listing.		
15. Use the P switch.		
16. Use the W switch.		
17. Display a single file.		
18. Change the current drive.		
19. Display a group of files with the * character.		
20. Display a group of files with the ? character.		

Competency Mastered - MCOT 1302 Microcomputer Operating Systems	Rating Scale	Sign-Off Date
21. Print the screen.		
22. Backup a diskette.		
23. Create a backup diskette.		
24. Write-protect a diskette.		
25. Copy a diskette using the diskcopy command.		
26. Change a diskette label using the diskcopy command.		
27. Delete a volume label.		
28. Obtain on-line help.		
29. Use the O switch.		
30. Use the B switch.		
31. Use the L switch.		
32. Use the S switch.		
33. Set environment variables.		
34. Remove environment variables.		
35. Use the prompt command.		
36. Create a subdirectory.		
37. Make a directory using the MKDIR command.		
38. Copy a file using the copy command.		
39. Change directories using the CHDIR command.		

Competency Mastered - MCOT 1302 Microcomputer Operating Systems	Rating Scale	Sign-Off Date
40. Rename a file.		
41. Remove a subdirectory.		
42. Set the path of the operating system.		
43. Use the tree command.		
44. Use the following DOS editing keys: F1, F2, F3, F4, F5, F6, Del, Ins, and Esc.		
45. Use the DOS key list.		
46. Display the DOS key list.		
47. Recall commands from the DOS key list.		
48. Edit commands from the DOS key list.		
49. Delete all commands from the DOS key list.		
50. Enter multiple commands on the same list.		
51. Write a DOS macro.		
52. Create a single macro.		
53. Execute a macro.		
54. Create multiple command macros.		
55. Use a replaceable parameter in a macro.		
56. List all macros in memory.		
57. Delete a macro from memory.		
58. Save all macros on disk.		
59. Create a batch subdirectory.		
60. Use the ECHO command.		

EMPLOYABILITY COMPETENCIES

PERSONAL CHARACTERISTICS

Directions: Rate the student by checking the appropriate number on each scale. The ratings should be based on your observation of the student rather than grades given in class.

Rating Scale: 3 Above Average
2 Average
1 Below Average

3	2	1	
			1. Relations with others (effectiveness in working with students, instructors, and others; cooperation; shows respect)
			2. Dependability (attendance, punctuality; adherence to schedules and deadlines; consistency and results; perseverance)
			3. Work attitudes (willingness to learn; willingness to accept and profit from evaluation; enthusiasm; initiative; commitment; pride in work)
			4. Communication (listening, speaking, and nonverbal skills; effectiveness in communicating with students, teachers and others)
			5. Personal hygiene/grooming (personal health care and cleanliness; dresses and maintains self appropriately
			Others (specify) _____ _____

JOB SEEKING TECHNIQUES

Directions: Evaluate the student by checking the appropriate number or letter to indicate the degree of competency. The rating for each task should reflect employability readiness rather than the grades given in class.

Rating Scale: 3 Above Average
2 Average
1 Below Average
N No Exposure

3	2	1	N	
				1. Apply information about self and job opportunities in career decision making
				2. Write a resume
				3. Prepare a job application form
				4. Write letters of application and acceptance
				5. Arrange for personal references
				6. Apply job search techniques
				7. Arrange a job interview
				8. Apply job interview techniques
				9. Evaluate job offers (actual or simulated)
				Others (specify) _____ _____ _____

ENTREPRENEURSHIP AWARENESS

Directions: Evaluate the student by checking the appropriate number or letter to indicate the degree of competency. The rating for each task should reflect employability readiness rather than the grades given in class.

Rating Scale: 3 Above Average
2 Average
1 Below Average
N No Exposure

3	2	1	N	
				1. Describe five characteristics of a free enterprise economic system (ownership of property, profit motive, risk taking, competition, supply and demand)
				2. Name four forms of business ownership (sole proprietorship, partnership, corporation, cooperative)
				3. Describe advantages and disadvantages of small business ownership
				4. Identify steps necessary to start a business (evaluate need, site selection, marketing plan, financial plan, management plan)
				5. Identify business opportunities related to training
				6. Identify personal traits of the entrepreneur (versatility, aspirations, energy, integrity, adapt ability, etc.)
				Others (specify): _____ _____

TEACHER COMMENTS: _____

"Real World Portfolios"
F-088.10-axxxxx.96.09.22-033

Chris Ferguson
Central Texas Tech Prep Consortium
Temple College
2600 South First Street
Temple, TX 76504
(817) 773-9961

Work Experience Portfolios Might Contain

Journals on Work Process

Journals can be used for many purposes, including:

1. To give the student a means of reviewing presented material or work.
2. To provide the teachers with proof that s/he does understand process.
3. To cause the student to evaluate.

Descriptions of Work Completed

This description may take the form of description of process, activity, group interactions, explanation, feelings and others. The key, of course, is for the students to learn to respond to situations in writing. These may be either 4 to 7 sentence responses or full essays.

Draft Copies of Work

Though we often think that only the finished product is important, both the student and an outside evaluator will benefit from assessing the entire package. How did the student formulate ideas, how did the student move from step to step, how much improvement was made from original to final? and so forth.

Picture Completed Jobs

With good pictures, schematics, or drawings, the student can "display" works that often cannot be put into a bound volume. It is also good training for the students to realize that visual representation of real applications is an important lifetime acquisition.

Evaluations (Self and Third Part)

Though similar to recommendations, this area offers the portfolio viewer a much more detailed look at specific skill areas.

Job Competencies Chart

Again, similar to both recommendations and evaluations, these charts create a quick visual to specific skills. Sometimes evaluations will come in the form of charts. Preprinted professional-type charts are very solid pieces in any portfolio.

Representative Work from Other Classes

Students seldom see the importance of cross-curricular development; however, the students are not generally to blame. Seldom do teachers cross the lines. To teach students the importance of integrated material, they must be given the opportunity to move across lines and intersplice knowledge.

Creative/Innovation Work Design

Not only is the inclusion of samples of this type of work important, but having the student find a means to put this type of work in the portfolio is also, in and of itself, creative and innovative.

Resume

Most students are unaware of themselves. Though it may sound a little peculiar, students are seldom appreciative of their own actions, ideas and successes. However giving a student a copy of an adult resume format and asking the student to put him/herself into that format is equally difficult. Most students are unable to recatagorize their lifestyles into acceptable parts of a resume without help. Students have to be led by the hand at the onset and then turned loose.

Letters of Recommendation

This will look good in the file, but more importantly it causes the student to realize that his/her actions and impressions on other people have relevance. Because the student has the opportunity to see the letter, it is not confidential and therefore looses some of its weight; however, the worth to the student esteem and real-life lesson far outweighs this limitation.

Samples of Products

Brochures
Proposals
Visual Aids for Oral Presentations
Newspapers
Narratives
Mapping
Other Creative Endeavors

Goal/s Document

Though some of the students will place a short goal statement on their resumes, they can still create a separate goal/s document. It can take the form of a narrative, description, explanation or what ever seems appropriate. The key is to force the students to think about themselves and their futures.

Certification Portfolio

Idea taken from *Portfolio News*, Winter, 1992, Volume 3, Issue 2

1] Letter of Introduction

Self-reflective letter

2] Supervised Practicum Experience Evaluation

Done by practicum or job supervisor

3] Career Development Package

Resume, recommendations, and such

4] Written Report

Ten page report on a topic of student interest -- should contain all of the prewriting and final drafts

5] Work Samples

Work that demonstrates mastery of specific fields

"The Master Plan for Career and Technical Education"
G-022.xx-gxxxxx.93.00.00-252

Texas Higher Education Coordinating Board
7745 Chevy Chase Drive
Austin, TX 78752
(512) 483-6250

PUBLIC EDUCATION
CORE STANDARDS AND MEASURES FOR CAREER AND TECHNOLOGY EDUCATION
1992-93 SCHOOL YEAR

1. All students who were enrolled in a coherent sequence of courses in career and technology education will pass the TAAS exit test at the standard set by the State Board of Education.

2. At least 95 percent of 12th grade students who have completed a coherent sequence of courses in career and technology education programs (a) obtained a certification of competency by an accepted licensing or certification agency, or (b) successfully completed a criterion-referenced test of occupational competency which has been validated, or (c) demonstrated completion and competency in the essential elements for the coherent sequence of courses. Within three years this standard will be based on performance measures which assess the level of proficiency by employers and/or institutions of higher education.

3. At the one-year follow-up, 75 percent of students who earned their high school diploma after having completed a coherent sequence of courses in a career and technology education program were (a) enrolled in a postsecondary educational institution, or (b) enrolled in a registered apprenticeship program, or (c) in training related to their career and technology program, or (d) in a military service, or (e) employed in a paid or unpaid job related to their career and technology education and training, or (f) in other work site programs.

4. All students enrolled in a coherent sequence of courses in career and technology education will graduate with their cohorts at the rate set by the State Board of Education.

5. The percentage of students who are members of special populations enrolled in a coherent sequence of courses in career and technology education will be comparable to the percentage of students who are special populations in grades 7-12.

BEST COPY AVAILABLE

OVERVIEW OF HIGHER EDUCATION
PERFORMANCE MEASURES AND CORE STANDARDS

In 1990, Congress gave significant new direction to technical education by passing the Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1990. The bill places new emphasis on improved program performance and grants increased flexibility to state and local recipients of federal funds in exchange for increased accountability. The intent of the act is not to tie federal funding to institutional attainment of performance standards, but rather to encourage progress toward agreed-upon goals within each state.

Under the act, the statewide system of core standards and performance measures for technical education programs must include:

1. measures of learning and competencies gains, including student progress in the achievement of basic and more advanced academic skills;

2. one or more of the following:
   - student competency attainment,
   - job or work skill attainment or enhancement, including student progress in achieving occupational skills necessary to obtain employment in the field for which the student has been prepared or in which the student is preparing to enter,
   - retention in school or completion of secondary school or its equivalent, and /or
   - placement into additional training or education, military service or employment; and

3. incentives or adjustments that are (a) designed to encourage service to targeted groups or special populations and (b) developed for each student and, if appropriate, consistent with student's individualized education program.

The higher education performance measures and core standards document was approved by the Coordinating Board in July 1992 and the State Board of Education in February 1993. It includes nine measures and eight standards, with one measure yet undetermined and continued development to take place during the next four years. Institutions began collecting data in fall 1992 and will make their first full report of the data to the Coordinating Board in October 1993.

BEST COPY AVAILABLE

Several measures are *cohort* performance measures requiring that data collection follow groups of student from the beginning to the end of their educational enrollment. Other measures are *point-in-time* performance measures that provide a "snapshot" of a group of students at any given time. Measures for adult vocational education have been drafted, although not finalized, and the associated standards are expected to be developed during spring 1993. Both the measures and standards for adult vocational education should become effective in fall 1993.

Additional information or a copy of the entire 46-page document may be obtained from the Coordinating Board: Director of Instructional Programs, Community and Technical Colleges Division, Texas Higher Education Coordinating Board, P.O. Box 12788, Austin, Texas, 78711 (512/483-6250).

"SOICC Activities for PY 1995"
G-060.xx-gxxxxx.95.09.30-001

Texas State Occupational
Information Coordinating Committee
Travis Building, Suite 205
3520 Executive Center Drive
Austin, TX 78731

Texas State Occupational Information Coordinating Committee

TEXAS SOICC

Travis Building, Suite 205, 3520 Executive Center Drive, Austin, TX 78731 • (512) 502-3750 or 1-800-822-7526 in Texas

Richard C. Froeschle
Executive Director

SOICC ACTIVITIES FOR PY1995
September 30, 1995

1. PROJECT NAME: ALMIS Wage Record Research Consortium
SOICC STAFF CONTACT: Marc Anderberg/Melissa Garza
CONTRACTOR: DOL/ETA through Maryland DEED

PROJECT DESCRIPTION:
As a Tier I principal state in the consortium, the Texas SOICC will implement three research activities relative to using UI wage records for comprehensive follow-up: (1)identify entry level occupations leading to career advancement and most likely to be filled by recent education and program completers, (2)identify coverage gaps in UI wage records and evaluate methods for gathering occupational employment data where gaps exist, (3) evaluate alternatives for getting wage record follow-up information into the hands of One Stop customers to facilitate rational career choice.

2. PROJECT NAME: Study of Emerging and Evolving Occupations in the Texas Economy
SOICC STAFF CONTACT: Terry Ramsey/Marc Anderberg

PROJECT DESCRIPTION:
The SOICC will conduct a research project to identify and document occupations which will emerge as significant to the Texas economy as a result changes in technology discovery and application. Occupational titles identified through both the Texas and Florida follow-up information systems will be combined with a literature search and review. Unlike previous efforts, this project will provide a technical reference manual that documents the research design for future replication. Characteristics of each occupation in terms of growth potential, skill requirements, SCANS requirements etc. will be included. Recommendations for incorporating these occupations in labor market information systems and demand forecasts will be included.

3. PROJECT NAME: Program Major System for Classifying Secondary Course Taking Activity
SOICC STAFF CONTACT: Dan Bristow/Marc Anderberg

PROJECT DESCRIPTION:
Presently there is no way to accurately categorize individual student vocational and academic course taking activity in Texas secondary education in a way that can yield program level analysis of labor market outcomes. The program major project proposes

to develop a structure which is primarily based on the federal Classification of Instructional Programs (CIP) taxonomy to provide discrete majors based on flexible but delimited concentration of coursework. These program majors will be recommended for inclusion in the PEIMS database for all students such that the degree of training relatedness in former student's labor market outcomes can be determined and a process of continuous program improvement, with recommended course groupings, can be encouraged and implemented.

4. PROJECT NAME: **RESCUE Software Development grant**
SOICC STAFF CONTACT: John Romanek/Jon Hochberg

PROJECT DESCRIPTION:
The RESCUE project entails the development of a software system and new data development geared to ease the transition of dislocated workers back into the labor market. Several components will mirror SOCRATES functions however the RESCUE system will be written for the Microsoft Windows environment in a simultaneous access network mode. It also include community impact components to assess the general economic and specific industry and occupational impacts of a mass layoff. The software will be used by state office and title III staff involved with worker dislocations. It is further envisioned that a variation of the RESCUE system will be available through the One Stop Career Centers. The project also includes the longitudinal follow-up of previous title III customers.

5. PROJECT NAME: **One Stop Consumer Report Card (CRC) Project**
SOICC STAFF CONTACT: Marc Anderberg/John Romanek/Jim Folkestad

PROJECT DESCRIPTION:
This DOL funded ALMIS project will create consumer report cards to provide customer friendly information about the placement and performance of education and training service providers. The report cards' layout and validity will be dependent on the availability of reliable and extensive follow-up data which can be obtained in a most cost effective fashion through automated record linkage. The Texas SOICC, in connection with the One Stop staff, have proposed taking the lead nationally on creating a series of automated report card formats and comparison tools to demonstrate service provider effectiveness. Also included will be a field guide for setting up a wage record based follow-up system.

6. PROJECT NAME: **TEXAS C.A.R.E.S. Infrastructure Project**
SOICC STAFF CONTACT: Arnold Williams/John Romanek

PROJECT DESCRIPTION:
The TEXAS C.A.R.E.S. Infrastructure project is a funding and logistical support environment for producing copies and packaging of the CD-ROM software, providing

concerns with more than $1,000 gross sales. Although occupational estimates are collected per se, data are categorized for farm proprietors, unpaid family workers, farm workers of 150 days or more and workers with fewer than 150 days.

9. PROJECT NAME: Automated Student and Adult Learner Follow-up System
SOICC STAFF CONTACT: Marc Anderberg/Rich Froeschle

PROJECT DESCRIPTION:
This project has been operational for the past three years with progressively more extensive experimentations with outcomes data collection for participants of the Texas education and training system. The system takes social security numbers from any participant or completer of a workforce development or education program and seeks to identify post program outcomes in continuing education or the labor market. The UI wage record database is used to track employment outcomes as is the federal civil service, military and post office records. Continuing education is identified through matches with the THECB master enrollment files. The purpose of the system is to identify program outcomes, inform service providers and thereby initiate a process of continuous program improvement. Enhanced program accountability and improved labor market information are by-products of this effort.

10. PROJECT NAME: Improved Career Decision Making (ICDM) Workshops
SOICC STAFF CONTACT: Rich Froeschle/Bill Witter

PROJECT DESCRIPTION:
The SOICC conducted 66 ICDM workshops throughout the state during PY1994 and received rave reviews for program content, delivery and relevancy. For PY1995 SOICC will again conduct 50 ICDM workshops in conjunction with Tech Prep. A modified curriculum will reflect a new emphasis on using labor market and career resources within the School To Work context but will maintain the focus on understanding labor market trends and how to interpret data for use in career counseling. Updated curriculum materials will include new Texas and Regional projections.

11. PROJECT NAME: NOICC Basic Assistance Grant (BAG)
SOICC STAFF CONTACT: Rich Froeschle/respective staff

PROJECT DESCRIPTION:
The NOICC BAG grant represents the one year and long term planning document to guide SOICC project activities. The four major program responsibilities are broken down into project detail and a budget statement is included. The NOICC grant is strongly supported by outside contract activities and therefore provides the managerial and support staff and logistical infrastructure for the entire SOICC operation. Project activities scheduled for PY1995-96 include the release of a new Career Success tabloid, and an elementary school version of the tabloid, a new Directory of Licensed

Findings from the Survey and Phone Interviews

The findings from the 1997 Tech Prep Student Outcomes Assessment Questionnaire (see Appendix A) and the phone interviews have been integrated for the purposes of this handbook. The findings will be discussed in the following sections: response characteristics, involvement in student outcomes assessment, the assessment process, developing/implementing the student assessment plan, and evaluating/improving the student outcomes assessment plan.

Response Characteristics

Questionnaires were received from 19 out of 25 of the Tech Prep consortia, indicating that there is geographic representation in the responses (see Appendix B). The number of responses varied considerably by consortia, ranging from a low of one to a high of 16, with an average of just over 6 responses per consortium. There were six consortia from which no responses were received. To ensure responses from all Tech Prep consortia, future surveys may require the joint sponsorship of the Texas Higher Education Coordinating Board and the SPECAP research group.

The survey respondents represented performance assessment experts from a wide diversity of career pathways.

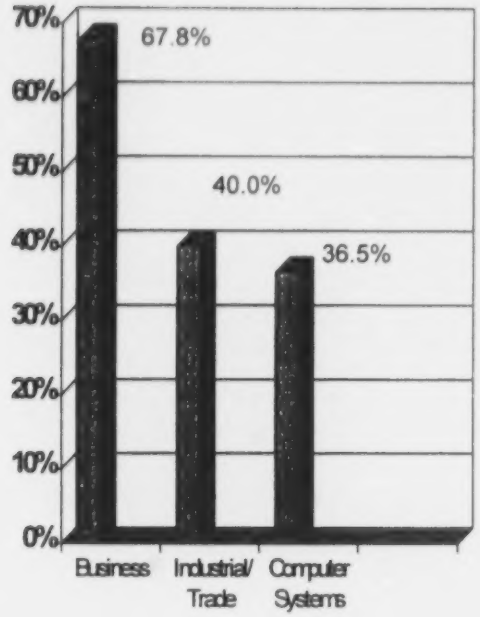


Figure 2. Top three career pathway of respondents.

Slightly over two-thirds of respondents are affiliated with a business career pathway, with two-fifths being affiliated with an industrial/trade pathway, and slightly more than one-third with a computer systems pathway. This distribution of responses indicates that the consortium directors did target questionnaires towards a wide variety of individuals within their consortia. The fact that the percentages do not add up to 100% indicates that a number of respondents, such as Tech Prep directors, are affiliated with multiple career pathways.

The Tech Prep directors were instructed to target the questionnaires they received to as many different stakeholder groups as possible. Figure 3 represents the number of different stakeholder groups in the survey responses.

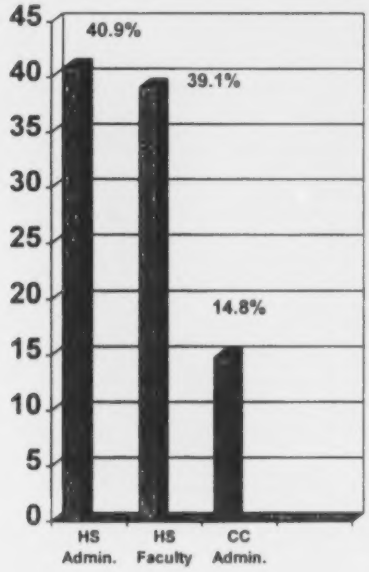


Figure 3. Top three stakeholder groups represented in the survey.

The majority of the survey respondents represent either high school faculty or administrators, with a much smaller number of community college faculty and administrators also represented among the survey respondents. The high representation of individuals from the education sector is perhaps not surprising on a questionnaire dealing with student performance assessment. Clearly, educators are in the best position to assess the school-based experiences of Tech Prep students. Less

than one-tenth of the respondents come from business or industry. This percentage is low, considering that business and industry representatives are often in the best position to assess the work-based performance of Tech Prep students.

One respondent provides additional insights about how business and industry participate in student performance assessment:

> The employer evaluates the student on 16 or so competencies after the first six weeks of training. The plans are developed jointly with the employer. The employer selects the competencies the student should know . . . The competencies are built by the employer--it is the curriculum for the student at the workplace. It takes about 40 minutes with the employer to develop the competencies . . . For the training plans we use the national standards established for high tech manufacture as well as the SCANS skills. We go through each section and take about 30 to develop with the student at that work station.

Involvement in Student Outcomes Assessment

One of the questions on the 1997 Tech Prep Student Outcomes Assessment Questionnaire asks respondents "Have you participated in any of the following student outcome assessment activities?"

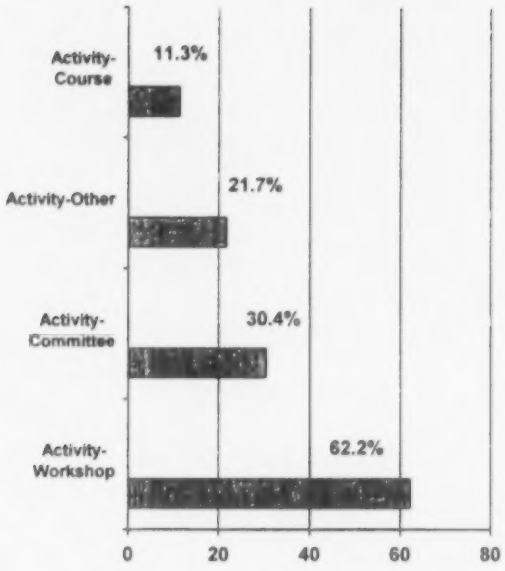


Figure 4. Top four student outcome activities in which respondents' participated.

Slightly less than two-thirds of the survey respondents (62.6%) indicate that they have attended a professional development workshop on student outcomes assessment. This suggests that professional development workshops on student outcomes assessment are available to Tech Prep practitioners. A much smaller number of respondents (30.4%) indicate that they have served on a student outcomes assessment committee, or have enrolled in a class on student outcomes assessment (11.3%). These relatively small percentages suggest that workshops on student outcome assessment are much more prevalent than are these other types of professional development/involvement.

BEST COPY AVAILABLE

A second question asks respondents to indicate the role(s) that they played in developing their student outcome assessment plan.

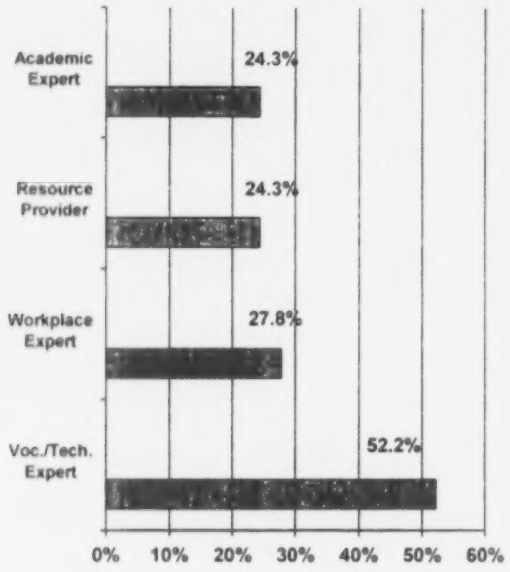


Figure 5. The top four roles survey respondents indicate they play in their student outcome assessment plans.

The role most commonly indicated (52.2%) is that of vocational/technical subject matter expert, no doubt reflecting the fact that the majority of respondents are vocational/technical faculty. Other responses give additional insights into the types of individuals who responded to the survey, with roughly a quarter indicating that they play roles as experts in workplace competencies (27.8%), academic subject matter (24.3%), or as resource providers (24.3%). These roles correspond with those one might expect

from representatives from business and industry, academic subject matter faculty, and administrators, respectively.

The Assessment Process

A number of questions on the survey elicit information on the general processes involved in developing, implementing, and evaluating the student outcomes assessment plan. One of these questions asks respondents how long it took them to develop, implement, and evaluate their student outcome assessment plan. The average number of months reported is a little over nine months, or roughly the equivalent of one academic year. Respondents are also asked what percentage of their total assigned work load they devoted to developing, implementing, and evaluating their student outcomes assessment plan. The average percentage of one's total time devoted to the assessment process is reported to be slightly under one-fifth (17.9%). The time required to develop, implement, and evaluate their student outcomes assessment plan is clearly a significant component of the total time that respondents indicate they work.

Respondents also indicate what groups have been involved in developing, implementing, and evaluating their student outcome assessment plans.

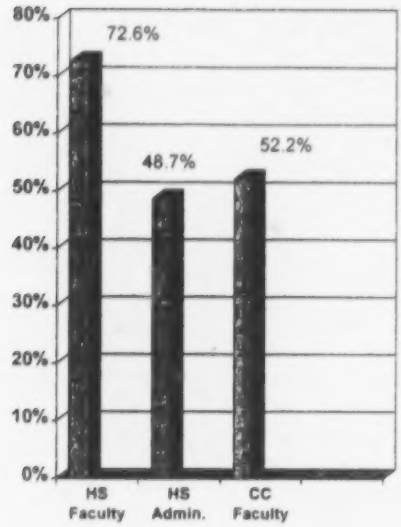


Figure 6. Top three groups involved in developing, implementing, and evaluating their student outcome assessment plans.

The groups most often reported as involved in this process include high school faculty (72.6%), community college faculty (52.2%), high school administrators (48.7%), business/industry representatives (42.5%), and community college administrators (38.1%). It is important to note that more than two-fifths of these student outcomes assessment plans involve business/industry representatives in their development, implementation, and evaluation. Clearly, involvement of business/industry experts is seen as essential by many involved in Tech Prep programs in assessing student performance.

A final set of questions asks respondents to indicate their agreement with statements regarding their overall assessment planning process.

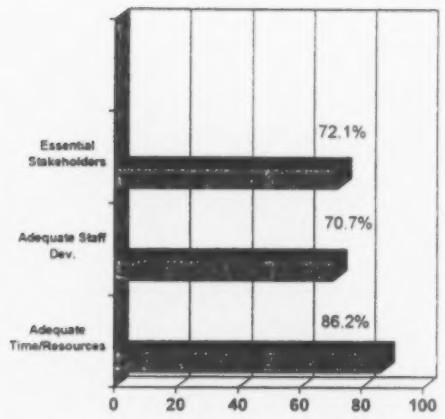


Figure 7. Respondents that "Agree" and "Strongly Agree" to three statements regarding their assessment planning process.

A large majority of the respondents "agreed" or "strongly agreed" that adequate time and resources were provided (86.2%); that adequate staff development was provided (70.7%); and that all essential stakeholder groups were involved (72.1%) in the assessment planning process. Clearly, the majority of respondents feel that they have had adequate resources, time, training, and involvement of essential stakeholders in planning their assessment process. This strong agreement on the adequacy of resources and personnel suggests that documenting student performance has been given a high priority by Tech Prep consortia and educational institutions.

Developing/Implementing the Student Assessment Plan

Respondents were asked a number of questions about the development and implementation process for their student assessment plan.

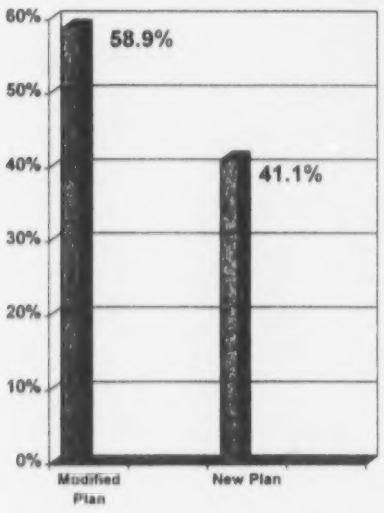


Figure 8. Percentage of respondents who indicated their plans were modifications of existing plans or entirely new plans.

One of the first questions is whether their assessment plan is an entirely new plan, or one that has been modified from an existing plan. The majority (58.9%) indicate that their assessment plan is a modification of an existing plan. This finding corresponds with the findings of last year's survey on curriculum development and evaluation, which found a similar percentage reporting that their Tech Prep program curriculum is a modification of an existing curriculum.

A second question asks respondents what levels have been incorporated within their assessment plan.

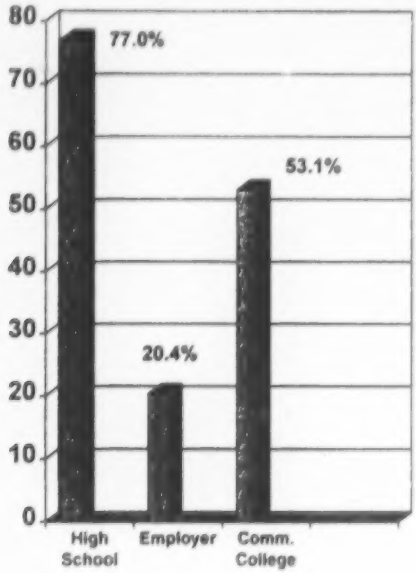


Figure 9. Top three entities into which the assessment plan has been incorporated.

The majority indicate that their student assessment plan includes outcomes at the high school level (77.0%) and at the two-year college level (53.1%), with a minority of respondents also indicating that their plans incorporates outcomes from employers (20.4%) and from four-year colleges (8.0%). Clearly, the relatively small number of respondents indicating that employer outcomes are included in their student assessment plans is a cause for some concern. Finding ways to encourage more Tech Prep programs to include employer assessments of students' workplace competencies

and employability skills would certainly strengthen student performance assessment plans.

Respondents were also asked to indicate what types of student outcomes assessment they presently utilize.

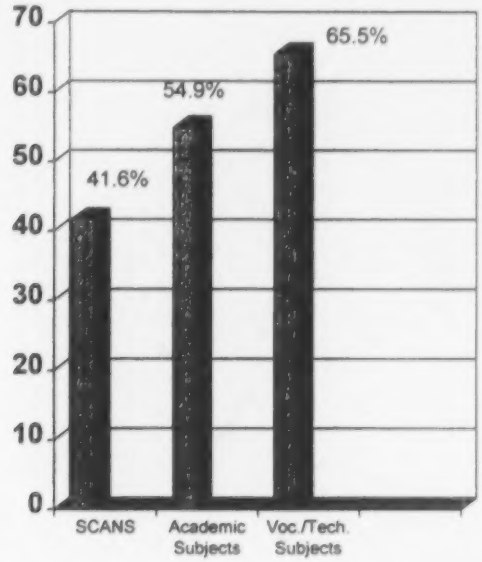


Figure 10. Top three types of student outcomes assessments used.

The majority indicate that they assess competency in vocational/technical subject matter (65.5%), as well as in academic subject matter (54.9%). A minority of respondents indicate that they assess SCANS competencies (41.6%), job competency (38.9%), or that they use state licensure exams (30.1%) for student outcome assessment. Clearly, student assessment plans would be strengthened if greater

emphasis is placed on assessing the job and SCANS competencies of Tech Prep students.

A final question asks respondents to indicate what student outcome modalities they presently are utilizing.

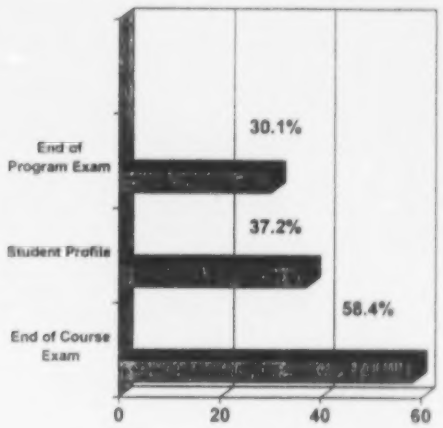


Figure 11. Top three modalities used in student performance assessment.

The majority of respondents indicate that they use end-of-course examinations (58.4%) as a modality for assessing student outcomes. A minority of respondents indicate that they use a number of other modalities, including: student competency profiles (37.2%); end-of-program exams (30.1%); student portfolios (26.5%); job competency examinations (23.9%); job placement tracking systems (23.9%); and student tracking systems (23.0%). Clearly, the final exam is the most commonly utilized modality for assessing student performance.

BEST COPY AVAILABLE

One phone respondent discusses in more detail the challenges associated with using competency profiles.

> Getting independent school districts to send competency transcripts on time and filled out correctly is a major challenge. We have developed individual profiles on each course and for each student. When profiles are incomplete, we have to track down the teachers to have them complete them. Teachers are sometimes unwilling to complete the profiles, because they have to evaluate every student that comes to college.

Another respondent describes other challenges associated with the use of competency profiles.

> One of the biggest challenges is helping teachers learn how to document competencies. The documentation is lengthy, particularly in business careers with upwards to 75 competencies. Teachers need to document quality, because offering articulated credit for work done in high school puts the reputation of the high school teachers on the line.

Another respondent provides more detail about how they use portfolios in her consortium to assess student outcomes.

> Teachers give projects to be completed on the computer. Students work in teams, and are assessed by three different teachers. The portfolios are kept in a file system, and handed over to the student's next teacher . . . It gives students an idea of where they are at the moment, their capabilities, and allows them to set goals. The portfolio incorporates academic, vocational, electives, career interests, goals, talents, everything . . . After the students got into what the portfolios were doing and saw that they could use them to get jobs and scholarships, then it wasn't a problem when they would have to re-do them, perhaps a dozen times, before they were in a final form . . . It gives the student focus and self-esteem.

A Tech Prep director in another consortium offered her belief that portfolios of student performance would be used more often in the future.

> Portfolios are statements of what the student can do. They are very individualized and can be focused toward the employer if the student goes from secondary directly to work or toward another direction should the student want to continue with his or her education at the postsecondary level. They speak louder than resumes.

In at least one consortium, a respondent discusses how community college faculty were involved in helping high schools assess Tech Prep student performance.

> Community college faculty are in the process of designing an exit test for high school seniors to determine which students should get articulated credit from their high schools.

In yet another consortium, a Tech Prep director discusses the benefits of using end-of-course exams.

> Using the end-of-course exam has two benefits: it provides consistency at the secondary and postsecondary level--so teachers are really teaching toward the same thing in order that students can be more successful when they go into the second level of the course, and the Coordinating Board has identified end-of-course exams as a means for proving requirements have been met to the senior colleges.

Evaluating/Improving the Student Outcomes Assessment Plan

A final series of questions asks respondents about their processes for evaluating and improving their student outcomes assessment plan. The first question is how often their student outcomes assessment plan is evaluated for effectiveness.

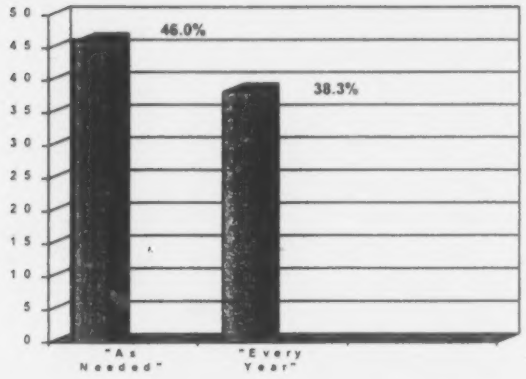


Figure 12. Top two responses on how often student assessment plans are evaluated.

The majority of respondents indicate that they evaluate their plan "as needed" (46.0%); or "every year" (38.3%). This suggests that the majority of respondents closely monitor their student outcomes assessment plans for effectiveness.

A second series of questions asks respondents to indicate their agreement with statements about their student outcomes assessment plan.

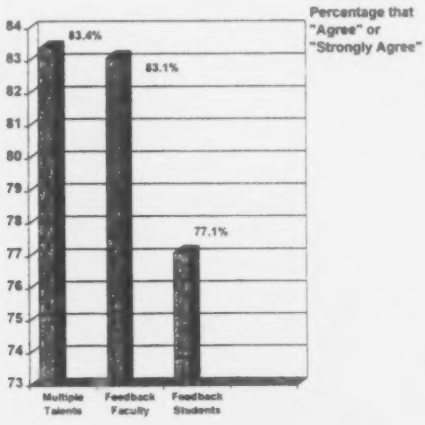


Figure 13. Responses of participants "agreeing" and "strongly agreeing."

The majority of respondents "agree" or "strongly agree" that their plan captures the multiple talents that they are trying to develop in students (83.4%). A majority of respondents also "agree" or "strongly agree" that their student outcomes assessment plan provides meaningful feedback to faculty (83.1%); students (77.1%); and employers (65.6%). Clearly, respondents view their student outcome assessment plans favorably as providing meaningful feedback to relevant stakeholder groups and for being multidimensional in the outcomes assessed.

A final series of questions asks respondents to indicate their agreements with statements about the importance of student outcomes assessment and the impact of Tech Prep programs.

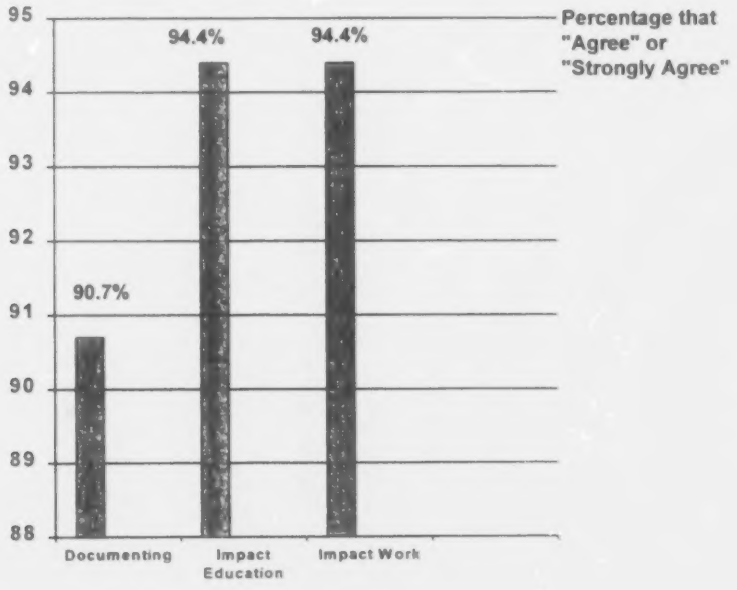


Figure 14. Percentage "agreeing" and "strongly agreeing" to statements on the importance and impact of student assessment plans.

A majority of respondents (90.7%) "agree" or "strongly agree" that documenting student outcomes is essential to Tech Prep. This widespread agreement that documenting student outcomes is essential to Tech Prep reflects a strong sentiment among respondents that those involved in Tech Prep have a responsibility to demonstrate the positive impact of their programs on students. An even greater percentage of respondents "agree" or "strongly agree" that Tech Prep programs have had a positive impact on student preparation for further education (94.4%) and on student preparation for work (94.4%).

One respondent expressed the positive impact of Tech Prep programs in the following manner:

> Tech Prep programs help students make decisions about careers, allow them to explore some things, provide mentors in business. Students like classes in which theory is connected to application. Tech Prep programs help students to focus on finding employment and help them raise their self-esteem about their ability to handle college.

Another respondent reinforces this theme about the positive influence of Tech Prep programs.

> Tech Prep students are encouraged to go on to the community college and the four-year college. They can use their skills to earn money while in college. Tech Prep helps teach them how to work in teams, as well as academic and workforce skills.

Yet another respondent also emphasizes the positive benefits of Tech Prep programs on students:

> Tech Prep students can assess their own life goals, and assess realistically how much money they would like to make. They come to understand that they will need to delay gratification to be able to earn the salary they want. Tech Prep

> students are motivated to plan, and to engage in worksite learning while in high school, allowing them to make money that they can save for college. Students who are involved in worksite learning learn the need for academic classes like physics, and the importance of a neat attire.

Another respondent indicates that teachers have also received positive benefits from participation in Tech Prep.

> Tech Prep programs have a positive impact on teachers' exposure to the workplace. Teachers have a greater awareness of the workplace, and can better match their academic content to the real world. They can change their teaching strategies to better meet student needs.

Clearly, the respondents to this survey feel strongly that Tech Programs are having a positive impact on student preparation for further education and work.

Recommendations and Conclusions

The data gathered by the SPECAP Research Group on student performance assessment demonstrates that Tech Prep educators are using a variety of methods to document the effectiveness of Tech Prep. The primary methods for documenting Tech Prep student outcomes involve testing students at the end of each course, competency profiles, portfolios, assessments of SCANS skills, and job competencies. Additionally, in fields like nursing, state licensure examinations are an additional form of assessment of student outcomes.

Other efforts to document student outcomes include surveys of students, employers, faculty, and other consortium stakeholders, statewide tests such as the TAAS and the TASP, statewide evaluation, and longitudinal student tracking systems. Clearly, there are a number of significant efforts to document Tech Prep student outcomes at the level of the classroom, program, consortium, and statewide. What appears to be less common are efforts to measure the impact of Tech Prep programs using pretests and posttests to determine the "talent" that has been developed by entire Tech Prep programs. Rather than attempting to assess the impact of Tech Prep programs on students, the majority of assessment activities are class-based, using final exams, competency profiles, and portfolios to document that Tech Prep students have mastered the subject matter, are employable, and have the job competencies covered within a specific class. Relatively few efforts were found to document Tech Prep program effects, other than in fields like nursing, where students are required to take state licensure examinations. Clearly, Tech Prep student performance assessment would be strengthened if more efforts were placed on documenting the impact of Tech Prep programs on the development of student talent.

A second approach to strengthening the assessment of Tech Prep student performance is to further involve members of business and industry in the planning for student performance assessment. As Tech Prep programs continue to include more work-based learning components as integral parts of their program, the need for business and industry experts to become more involved in helping plan for assessing student performance will become even more essential. Business and industry

representatives are presently involved in validating Tech Prep curricula, and in responding to surveys regarding their satisfaction with Tech Prep student preparation for the workplace. To further strengthen student performance assessment plans, business and industry representatives will need to become as involved as school-based faculty in ensuring that Tech Prep students have mastered job competencies and developed employability skills.

A third approach to strengthening the assessment of Tech Prep student performance is to create longitudinal student tracking systems. Some efforts at accomplishing this are being undertaken within individual colleges, like at Victoria College, and also at the state level, using wage records to track the placement of Tech Prep students into the work place. There needs to be a concerted effort to track Tech Prep students from high school, into two- or four-year colleges, and then into the work force. This will require a coordinated effort between the Tri-Agency staff of the Texas Department of Education, the Texas Higher Education Coordinating Board, and the Texas Department of Labor. A number of respondents to the phone interviews echoed this theme about the need for state assistance.

> I think we need to inquire into some sort of partnership or contracting--see what other agencies are collecting data, like TEC, and tap into or cross reference data. Part of the problem is the consistency of the data gathering systems . . . There is a problem with limited funds available and partnerships could help alleviate that problem.

Another respondent made a similar point in talking about the need for a student tracking system.

> We need a statewide system with the information sent to the districts. We don't have the personnel to do that ourselves.

A third respondent reinforces the point about the need for help in collecting student data.

> The consortia need to see who they can partner with to streamline the information and data gathering. With only three to five employees in a Tech Prep consortium, we can't collect all this data without a lot of partnering going on.

Another respondent also emphasized the need for the state to help in collecting data.

> It is important to find out what impact Tech Prep has on students, particularly to do comparisons between Tech Prep and non-Tech Prep students. There should be long-term studies of Tech Prep students done by the state. The problem is that PEIMS will not add additional fields, because Tech Prep does not have enough clout.

A similar sentiment for state involvement in data collection was expressed by a Tech Prep director in a major urban area.

> The state needs to decide what they expect Tech Prep student outcomes to be and develop a system to gather this data. There are mechanisms in place for schools to report data to the Coordinating Board. The fundamental question is deciding what to measure.

Another Tech Prep director from a major urban area in the state expresses his belief that the state needs to mandate that colleges track Tech Prep students.

> College presidents ask me where all the Tech Prep students are. I respond that they should have a system to identify students with articulated Tech Prep credit on their high school transcripts. I feel that TEA and THECB should mandate that colleges track students with articulated Tech Prep credit.

This same respondent goes on to discuss the challenges in documenting student outcomes in his region.

> The major barrier is that schools are not motivated to do the extra work in documenting student outcomes. Large urban schools do not have time to document student competencies. We have champions in about a third of the schools, who believe in assessment. Many of the schools will not release data with social security numbers because of concerns with student's privacy. Schools are overwhelmed with the number of Tech Prep students, and only address requests for data that are tied to funding. Statewide PEIMS data is inaccurate. Having career majors in PEIMS data would be very helpful. This is a political hot potato and Tech Prep can not get the state to mandate this. We are trying to use a SCANTRON system where students fill out a form with personal information, courses they have taken, and their plans for college. This form only gets filled out if students are taking a course for articulated credit. The present survey system that we use to gather this data works in rural schools where the regional Tech Prep director can work to get surveys filled out. However, in the urban area, only a small number of schools come to the meetings to find out how to fill out the survey.

Each state agency presently tracks students enrolled in either the secondary system, the postsecondary system, or in the workforce independently of each other. A coordinated system between these three agencies that could track students across sectors would make documenting Tech Prep effectiveness much easier. With such a system, Tech Prep students coming out of any high school in the state could be tracked to see what percentage successfully completed a postsecondary Tech Prep program, and/or successfully gained a job in the field for which they were trained. An agency like the Texas Higher Education Coordinating could serve as the lead agency in maintaining this longitudinal student tracking system. They could issue reports to each of the Tech Prep consortia within the state with data on the graduation, transfer, and placement rates of all Tech Prep students from that consortium. The provision of such a

longitudinal student tracking system by the state would lead to uniformity in the reporting of a number of Tech Prep student outcomes, and would provide the state with accountability measures for its investment in workforce education.

This request for statewide longitudinal tracking system would not obviate the need for individual Tech Prep programs to create their own longitudinal student tracking systems to document program specific student outcomes. These program-specific student outcomes might include academic outcomes, like the passage rate on a state licensure exam or other comprehensive exam, as well as measures such as student satisfaction with preparation for further education or work. The purpose of individual Tech Prep programs maintaining a longitudinal student tracking system would be to determine what experiences in their program have a positive influence on the development of particular student outcomes. With this information, stakeholders in Tech Prep programs would know how they might change their policies and practices to maximize the development of a particular student talent. Several phone interview respondents expressed this need to collect local data.

> There are big problems in trying to track students at the state level. Student outcomes are better tracked at the local level, where the local community and business have more control over the outcomes to be assessed. At the local level, consortia have a better feel for the types of competencies that businesses are seeking. It is easy to begin assessing outcomes at the local level. We are developing a software program to enter information about student upon entering their program.

Another common theme, expressed by a number of Tech Prep directors, is that both the state and the local consortia need to be involved in documenting student performance.

> Both the local level and the state need to share responsibility for documenting student outcomes. We do not yet have a system in place to track students, but we would like to know how many Tech Prep students are matriculating in college.

A third respondent discusses the issue of focusing on employer satisfaction.

> The fundamental question is whether employers are satisfied with the preparation of Tech Prep students. We are tracking students in our Tech Prep programs, using a computerized system that is consortium-wide. We talk to employers, and use follow-up questionnaires.

Another respondent gives a more detailed description of the student tracking system that they utilize.

> We use an Access database to keep track of Tech Prep student grades, and to run comparisons of GPA with non-Tech Prep students. We gather information on ethnicity, age, courses, grades, and run reports on GPA for each program. The Tech Prep directors should be responsible for deciding outcomes, and the local consortia should be responsible for gathering outcomes data on their own students.

Yet another Tech Prep director discusses the actions taken by her consortium in developing a local student tracking system.

> We have developed a database of 200 students that came from high school who enrolled in college, with information on what program they came from in high school, how many credit hours they received. Keeping track of student outcomes gives credibility to Tech Prep programs.

Another respondents discusses the challenges of creating their own student tracking system.

> One of the biggest challenges is the issue of time. Tech Prep directors have a limited amount of time and energy. In particular, cooperation between sectors is not always easy to develop. One of the challenges is that the PEIMS data that is presently collected does not give a true picture of Tech Prep effectiveness, and is often somewhat out-of-date. We have a student tracking system that tracks students through a four-year internship program. We find out if students obtain a job after they graduate. Surveys are sent out to ISDs, and the reports are broken down by grade as to how many Tech Prep students they have. Unfortunately, we get a low response rate, which calls into question the credibility of the data.

Another Tech Prep director also discusses the challenges of gathering data on Tech Prep student outcomes:

> One of the biggest challenges is the structure of the consortium. The consortium staff are facilitators, and have little control over the colleges in the consortium. High schools and community colleges in Texas pride themselves on being independent. I feel that one of the biggest challenges is that student outcomes have not been defined in a consistent manner by the state, nor is there consensus on how to gather the data. Right now, all that is available is TAAS scores, student achievement test data, and GPA.

A Tech Prep director in a major urban area expresses his belief that local consortia must be involved in documenting student outcomes:

> I feel that documenting student outcomes is critical, to ensure that parents and employers know what students have accomplished. It is also important for students to be aware of their own progress. I believe that assessment information is essential to improve programs, and to document that efforts devoted to Tech Prep programs are worthwhile, that there is a positive return. I feel that empirical data is essential to make the case for Tech Prep funding after federal funding is no longer available. I feel that gathering local data on student outcomes is critical, but I feel ineffective in gathering data.

Clearly, Tech Prep student performance is being assessed in a variety of ways at different levels within the state of Texas. These combined efforts are a good start to documenting student outcomes in Tech Prep programs. However, as has been discussed in this handbook, additional steps need to be taken to further strengthen present efforts to document Tech Prep program effectiveness. The following recommendations, based on the data gathered from the 1996-97 are made as suggestions for improving efforts at Tech Prep student performance assessment:

Recommendations

- **Assess Tech Prep student performance at the level of the program, measuring both cognitive and affective outcomes.**

- **Create longitudinal student tracking systems to track program-specific outcomes, such as student success rate on licensure exams, and student satisfaction.**

- **Create a statewide longitudinal tracking system to track consistently such Tech Prep student outcomes as graduation, transfer, and job placement rates.**

- **Involve business and industry experts in verifying mastery of employability and job competency skills in work-based components of Tech Prep programs.**

Conclusion

Tech Prep programs have had a positive impact on Tech Prep students' preparation for further education and work. Documenting this positive impact is presently being conducted primarily at the level of the course, where Tech Prep educators have established exams, competency profiles, and portfolios to verify that students have met school- and work-based competencies. To strengthen the efforts to document the effectiveness of Tech Prep programs, additional efforts need to be made to strengthen performance assessment at the level of the program, to further involve business and industry experts in verifying job and employability competencies, and to come up with a uniform statewide method of tracking student graduation, transfer, and job placement rates. These additional efforts to document Tech Prep student outcomes would go a long way towards demonstrating that Tech Prep educational reform has significantly improved the workforce education system in the state of Texas.

The SPECAP Group June 1997

Appendix A

Student Outcomes Assessment Questionnaire

1997 TECH PREP STUDENT OUTCOMES ASSESSMENT QUESTIONNAIRE

Directions for Answering Questionnaire

Your observance of these few directions will be most appreciated. Please focus on the assessment of student outcomes in the Tech Prep program with which you are most knowledgeable when answering the questions that follow.

- **Please make heavy marks that fill the oval.**

Example: Is this a survey on the assessment of student outcomes in Tech Prep programs?

[ ] Yes [ ] No

Part I - Demographic Characteristics

1. **Please indicate your consortium affiliation.** (Mark one only)

[ ] Alamo
[ ] Brazos Valley
[ ] Capital
[ ] Central Texas
[ ] Coastal Bend
[ ] Concho Valley
[ ] Deep East Texas
[ ] East Texas
[ ] Global Edge
[ ] Golden Crescent
[ ] Gulf Coast
[ ] Heart of Texas
[ ] Lower Rio Grande Valley
[ ] North Central Texas
[ ] North Texas
[ ] Panhandle
[ ] Permian Basin
[ ] Southeast Texas
[ ] South Plains
[ ] South Texas
[ ] Star Tech Prep
[ ] Texoma
[ ] Upper East Texas
[ ] Upper Rio Grande Valley
[ ] West Central Texas

2. **With what Tech Prep career pathway(s) are you presently affiliated?** (Mark all that apply)

[ ] Agriculture
[ ] Allied Health
[ ] Business
[ ] Computer Systems
[ ] Engineering Technology
[ ] Industrial/Trade
[ ] Protection Services
[ ] Human Services
[ ] Other

3. **Which stakeholder group(s) do you represent?** (Mark all that apply)

[ ] High school faculty
[ ] High school administrator
[ ] Community college faculty
[ ] Community college administrator
[ ] Four-year college faculty
[ ] Four-year college administrator
[ ] Business/industry representative
[ ] Labor representative
[ ] Government representative (PIC, WDB, etc.)
[ ] Other

Part II - Involvement in Student Outcomes Assessment

4. **Have you participated in any of the following student outcomes assessment activities?** (Mark all that apply)

[ ] Served on a student outcomes assessment committee
[ ] Attended a professional development workshop on student outcomes assessment
[ ] Enrolled in a course on assessing student outcomes
[ ] Other

5. **With what stage(s) of the assessment of student outcomes have you been involved?** (Mark all that apply)

[ ] Development of the assessment plan
[ ] Implementation of the assessment plan
[ ] Evaluation of the assessment plan
[ ] Improvement of the assessment plan

6. **What role(s) have you played in developing your student outcomes assessment plan?** (Mark all that apply)

[ ] Academic subject matter expert
[ ] Student outcomes assessment expert
[ ] Vocational/technical subject matter expert
[ ] Workplace competencies expert
[ ] Leader
[ ] Resource provider
[ ] Other

Part III - The Assessment Process

7. **How long did it take you to develop, implement, and evaluate your student outcomes assessment plan?** (Please indicate the number of months on the line below)

_____ months

8. **What percentage of your total time did it take to develop, implement, and evaluate your student outcomes assessment plan?** (Please indicate the percentage on the line below)

_____%

9. **What groups were involved in developing, implementing, and evaluating your student assessment plan?** (Mark all that apply)

[ ] High school faculty
[ ] High school administrators
[ ] Community college faculty
[ ] Community college administrators
[ ] Four-year college faculty
[ ] Four-year college administrators
[ ] Business/industry representatives
[ ] Labor representatives
[ ] Government representatives (PIC, WDB, etc)
[ ] Other

PLEASE TURN OVER

10. **Please indicate your agreement with each of the following statements about your assessment planning process.** (Circle one for each statement)

SA = Strongly agree
A = Agree
D = Disagree
SD = Strongly disagree

Adequate time and resources were provided SA.....A.....D.....SD

Adequate staff development was provided SA.....A.....D.....SD

All essential stakeholder groups were involved SA.....A.....D.....SD

Part IV - Developing/Implementing the Student Assessment Plan

11. **Was your student outcomes assessment plan:** (Mark one only)

[ ] created as an entirely new plan?
[ ] modified from an existing plan?

12. **Your student assessment plan incorporates outcomes at what levels?** (Mark all that apply)

[ ] High school
[ ] Community college
[ ] Four-year college
[ ] Employer follow-up

13. **What types of student outcomes assessment do you presently utilize?** (Mark all that apply)

[ ] Academic subject matter competency assessment
[ ] Job competency assessment
[ ] SCANS competency assessment
[ ] Vocational/technical subject matter competency assessment
[ ] State licensure examination
[ ] Other

14. **What student outcomes assessment modalities do you presently utilize?** (Mark all that apply)

[ ] End-of-course examination
[ ] End-of-program examination
[ ] Job competency examination
[ ] Job placement tracking system
[ ] Student tracking system
[ ] Student competency profile
[ ] Student portfolio
[ ] Other

Part V - Evaluating/Improving the Student Outcomes Assessment Plan

15. **How often do you evaluate the effectiveness of your student outcomes assessment plan?** (Mark one only)

[ ] As needed
[ ] Every year
[ ] Every two years
[ ] Every three years

16. **Please indicate your agreement with each of the following statements about your student assessment plan.** (Circle one for each statement)

SA = Strongly agree
A = Agree
D = Disagree
SD = Strongly disagree

Our plan captures the multiple talents we are developing SA..... A ..... D ..... SD

Our plan provides meaningful feedback to faculty SA..... A ..... D ..... SD

Our plan provides meaningful feedback to students SA..... A ..... D ..... SD

Our plan provides meaningful feedback to employers SA..... A ..... D ..... SD

17. **Please indicate your agreement with each of the following statements about student outcomes assessment.** (Mark one for each statement)

SA = Strongly agree
A = Agree
D = Disagree
SD = Strongly disagree

Documenting student outcomes is essential to Tech Prep SA..... A ..... D ..... SD

Tech Prep programs have had a positive impact on student preparation for further education SA..... A ..... D ..... SD

Tech Prep programs have had a positive impact on student preparation for work SA..... A ..... D ..... SD

Please return your completed questionnaire in the postage-paid envelope to:

Texas Tech University
Business Reply Center
Box 45017
Lubbock TX 79409-9989

THANK YOU FOR YOUR PARTICIPATION!

Appendix B

Geographic Representation of Responses to Questionnaire

CONSORT Consortium

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Brazos Valley	2	3	2.6	2.6	2.6
Capital	3	1	.9	.9	3.5
Central Texas	4	10	8.7	8.7	12.2
Concho Valley	6	4	3.5	3.5	15.7
Deep East	7	2	1.7	1.7	17.4
East Texas	8	5	4.3	4.3	21.7
Global Edge	9	8	7.0	7.0	28.7
Gulf Coast	11	16	13.9	13.9	42.6
Heart of Texas	12	3	2.6	2.6	45.2
Lower Rio Grande	13	2	1.7	1.7	47.0
North Central	14	15	13.0	13.0	60.0
North Texas	15	3	2.6	2.6	62.6
Panhandle	16	11	9.6	9.6	72.2
Permian Basin	17	6	5.2	5.2	77.4
South Texas	20	4	3.5	3.5	80.9
Star Tech Prep	21	2	1.7	1.7	82.6
Texoma	22	1	.9	.9	83.5
Upper Rio Grande	24	13	11.3	11.3	94.8
West Central	25	6	5.2	5.2	100.0
	Total	115	100.0	100.0	

Valid cases 115 Missing cases 0